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(54) Title: OLFACTORY AND PHEROMONES G-PROTEIN COUPLED RECEPTORS

(57) Abstract: The present invention is related to an olfactory or pheromone G-protein coupled receptor having an amino acid sequence which presents 95% sequence identity with the sequence SEQ ID NO. 1.



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OLFACTORY AND PHEROMONES G-PROTEIN COUPLED RECEPTORS

Field of the invention

10 [0001] The present invention is related to newly identified, isolated and purified members of the family of olfactory ligand (odorant or any other molecule able to interact with said receptor) and the family of pheromone ligand G-protein-coupled (preferably human) receptors as well as to the various uses that can be made of said
15 receptors.

[0002] The invention is also related to the polynucleotides sequences encoding said (preferably human) receptors.

20 [0003] The invention is further related to methods using receptor polypeptides and polynucleotides applicable to diagnostic and treatment in receptor-mediated disorders.

[0004] The invention is further related to ligand-screening methods using the receptor polypeptides and
25 polynucleotides, to identify agonists and antagonists used as improved flavours or perfumes, as well as the prevention and/or treatment of various disorders.

[0005] The invention further encompasses agonists and antagonists based on the said olfactory and pheromones
30 receptor polypeptides and polynucleotides and biosensors comprising said receptor polypeptides.

[0006] The invention is further related to procedures for producing the receptor polypeptides and

polynucleotides according to the invention, preferably by genetic recombinant methods.

Background of the invention

5 [0007] G-protein coupled receptors (GPCRs) are proteins responsible for transducing a signal within a cell. GPCRs have usually seven transmembrane domains. Upon binding of a ligand to an extra-cellular portion or fragment of a GPCR, a signal is transduced within the cell
10 that results in a change in a biological or physiological property or behaviour of the cell. GPCRs, along with G-proteins and effectors (intracellular enzymes and membrane channels modulated by G-proteins), are the components of a modular signalling system that connects the state of intra-
15 cellular second messengers to extra-cellular inputs.

[0008] GPCR genes and gene products are potential causative agents of disease and these receptors seem to be of critical importance to both the central nervous system and peripheral physiological processes.

20 [0009] The GPCR protein superfamily is represented in five families : Family I, receptors typified by rhodopsin and the beta2-adrenergic receptor and currently represented by over 200 unique members; Family II, the parathyroid hormone/calcitonin/secretin receptor family;
25 Family III, the metabotropic glutamate receptor family, Family IV, the CAMP receptor family, important in the chemotaxis and development of *D. discoideum*; and Family V, the fungal mating pheromone receptor such as STE2.

[0010] G proteins represent a family of
30 heterotrimeric proteins composed of α , β and γ subunits, that bind guanine nucleotides. These proteins are usually linked to cell surface receptors (receptors containing seven transmembrane domains).

[0011] Following ligand binding to the GPCR, a conformational change is transmitted to the G protein, which caused the α -subunit to exchange a bound GDP molecule for a GTP molecule and to dissociate from the $\beta\gamma$ -subunits.

5 [0012] The GTP-bound form of the α , β and γ -subunits typically functions as an effector-modulating moiety, leading to the production of second messengers, such as cAMP (e.g. by activation of adenylyl cyclase), diacylglycerol or inositol phosphates.

10 [0013] Greater than 20 different types of α -subunits are known in humans. These subunits associate with a small pool of β and γ subunits. Examples of mammalian G proteins include Gi, Go, Gq, Gs and Gt. G proteins are described extensively in Lodish et al., *Molecular Cell*
15 *Biology*, (Scientific American Books Inc., New York, N.Y., 1995), the contents of which are incorporated herein by reference.

[0014] Known and unknown GPCRs constitute now major targets for drug action and development.

20 [0015] More than 300 GPCRs have been cloned thus far and it is generally assumed that it exists well over 1000 such receptors. Mechanistically, approximately 50-60% of all clinically relevant drugs act by modulating the functions of various GPCRs (Cudermann et al., *J. Mol. Med.*,
25 Vol. 73, pages 51-63, 1995).

Summary of the invention

[0016] The present invention is related to newly isolated and purified identified members of olfactory
30 (odorant/ligand) and pheromones/ligands (SEQ ID NO. 1 to SEQ.ID NO. 548) and G-protein-coupled receptors as well as to polynucleotide sequences including recombinant sequences encoding said receptors, described hereafter.

[0017] The present invention is also related to non-described nucleotide and/or amino acid sequences homologous to the sequences corresponding to the receptors described hereafter.

5 [0018] Homologous sequences mean sequences which present a high sequence identity (which present an identity higher than 75%, 80%, 85%, 90% or 95%) with the complete sequence described hereafter.

[0019] Another aspect of the present invention is
10 related to a specific active portion of said sequences or a libraries of said active portion (ligand binding) of these sequences. Said portions could be partial or deleted receptors which comprise modifications (punctual mutations) or deletions upon the complete nucleotide or amino acid
15 sequences and which still maintain the active site(s) necessary for the binding of a specific ligand able to interact with said receptors.

[0020] Homologous sequences of the sequences according to the invention may comprise similar receptors
20 which exist in other animal (vertebrates, preferably mammalian) or specific human populations, but which are involved in the same biochemical pathway.

[0021] Such homologous sequences may comprise addition, deletion or substitution of one or more amino
25 acids or nucleotides, which does not substantially alter the functional characteristics of the receptor(s) according to the invention in order to form preferably an hybrid polypeptide with another transmembrane protein, suitable for rapid ligand screening.

30 [0022] Thus, the invention encompasses also a receptor and corresponding nucleotide sequence having exactly the same amino acid or nucleotide sequences (derived from olfactory neurons or olfactory epithelium) as shown in the enclosed sequence listing, as well as

molecules which differ, but which are not retaining the basic qualitative binding properties of the receptors according to the invention.

[0023] The invention is preferably related to said
5 human receptors characterised by the complete nucleotide
and amino acid sequences described hereafter, agonist and
antagonist compounds or inhibitors, preferably antibodies
or specific hypervariable portions thereof that bind
specifically to said receptors (i.e. that have at least a
10 10 fold greater affinity for said receptors than any other
naturally occurring antibody) and specifically antibodies
made by a process involving the injection of a
pharmaceutically acceptable preparation of such amino acid
sequence into a animal capable of producing antibodies
15 directed against said receptor.

[0024] For instance, a monoclonal antibody to the
receptor according to the invention is obtained by
injecting of an expression plasmid comprising the DNA
encoding said receptor into a non human mammal and than
20 fusing mouse spleen cells with myeloma cells.

[0025] The present invention is also related to the
polynucleotide according to the invention, possibly linked
to other expression sequences and incorporated into a
vector and host cells transformed by such vector (plasmid,
25 virus such as an adenovirus, liposomes, cationic
vesicles,...).

[0026] The present invention is also related to the
recombinant, preferably human receptor according to the
invention, produced by such host cells according to the
30 method well known by the person skilled in the art.

[0027] The present invention is also related to a
transgenic non human mammal comprising a partial or total
deletion of the genetic sequences encoding the receptor
according to the invention, preferably a non human mammal

comprising an homologous recombination "knock-out" of the nucleotide sequences (polynucleotides) according to the invention or a transgenic non human mammal overexpressing above natural level said nucleotide sequences (polynucleotides).

[0028] Said transgenic non human mammal can be obtained by methods well known by the person skilled in the art, for instance by the one described in the document WO98/20112 using classical techniques based upon the transfection of embryonic stem cells, preferably according to the method described by Carmeliet et al., *Nature*, Vol. 380, p. 435-439, 1996.

[0029] Preferably, said transgenic non human mammal overexpressing the polynucleotides according to the invention or portions thereof comprises said polynucleotides or active portions thereof incorporated in a DNA construct with an inducible promoter allowing its overexpression and possibly tissues and other specific regulatory elements.

[0030] Another aspect of the present invention is related to a method for the screening (detection and possibly recovering) of (odorant, pheromones or inhibitor thereof) compounds which are known or not known to be agonists, antagonists or inhibitors of natural compounds to the receptor according to the invention, said method comprising :

- contacting a cell or cell extract from the cell transfected with a vector expressing the polynucleotides encoding the receptor(s) according to the invention or active portion(s) thereof,
- possibly isolating a membrane fraction from the cell extract or the complete cell with a natural compound binding to said receptor under conditions permitting binding of said compound to said receptor, possibly by

the activation of a functional response (resulting in a detectable signal) and

- detecting the presence of any such compound by means of a bioassay, preferably a modification in the production of a second messenger or an increase in the receptor activity in the presence of another molecule (or compound) working as an agonist, antagonist or inhibitor of a natural known compound to the receptor according to the invention and thereby possibly recovering and determining whether said molecule (or other compound) is able to work as an agonist, antagonist or inhibitor of the natural compound to its receptor, preferably the second messenger assay comprises the measurement of intra-cellular cAMP, intracellular inositol phosphates, intra-cellular diacylglycerol concentration, arachinoid acid concentration, MAP kinase(s) or tyrosine kinase(s) pathways or intra-cellular calcium mobilisation.

[0031] The present invention is related to said molecules or compounds, preferably pheromones or flavours, including possible toxic molecules identified by said screening (identification and recovering) method and to their pharmaceutical, cosmetical and industrial (production of detergents, soap, shampoo, fragrances, odorant fingerprints, appetite suppressant compounds, etc.) use.

25 [0032] Such molecules or compounds may be used also for obtaining in mammal a modification of its taste and its physiological reactions to odorant, pheromones or flavours.

[0033] The present invention is also related to a (preferably nasal) spray for controlling appetite comprising the identified compounds or molecules by the method according to the invention in a suitable carrier.

30 [0034] Another application of such receptor is the trapping of odour by using the receptor, the cell or membrane according to the invention wherein the desired

odour ligand is absorbed by the binding of the odorant ligand to the odorant receptor.

[0035] The present invention is further related to an odour trap, using said method for trapping odour.

5 [0036] Preferably, the tested odorants or pheromones upon the receptor according to the invention are advantageously selected from different body secretions such as sweat, salivary, urine, vaginal secretions, sperm, etc. The tested odorants or pheromones upon the receptor are
10 also advantageously selected from the group of 16-androstene family, such as the 5 α -androst-16-en-3 α -ol, the 5 α -androst-16-en-3-one, androstadienone, a human pheromone described previously (Grosser et al.,
15 *Psychoneuroendocrinology* vol. 25, pages 289-299, 2000) and other androstenol derivatives; the group consisting of estrene family, such as 1,3,5(10),16-estratetraen-3-ol and other estradiol derivatives described in PCT/US92/00219, PCT/US92/00220 and EP0562843 ; the group consisting of
20 progestin family such as the human pheromone pregna-4,20-diene-3,6-dione (Monti-Bloch et al., *J. Steroid Biochem. Mol. Biol.* Vol. 65, pages 237-242) and other progesterone derivatives , the group consisting of small fatty acids such as acetic acid, propionic acid, butyric acid, isovaleric acid and isocaproic acid that compose the
25 putative human vaginal pheromone copulin and such as the trans-3-methyl-2-hexanoic acid found in human sweat, cyclic organic compounds homologs to known animal pheromone such as dehydro-exo-brevicommin and such as nepetalactone, and human homologs of the murin protein aphrodisin.

30 [0037] Other examples of such compounds are molecules present in vapour emanating from narcotics, like cocaine, marihuana, heroin, hashish, angel dust, gasoline, natural gas, alcohol, decayed human flesh, explosives,

plastic explosives, fire arms, gun powder, toxic fumes, noxious fumes or dangerous fumes, etc.

[0038] Said molecules or compounds could be used also for promoting or suppressing chemical communication.

5 Every stimuli involving the emission by an organism or an exogenous source of chemical compounds able to modify the probability of response of another organism or a part of another organism.

[0039] These molecules or compounds could be used in

10 the treatment or prevention of various disorders affecting, for instance, cell migration, cell death, cell growth, psychotic and neurological disorders, including anxiety, schizophrenia, maniac depression, depression or mound modification, etc.

15 [0040] These molecules or compounds could be used also for improving contraceptive medication, treatment promoting axonal growth, neural connection and nerves regeneration, in modulating male and female endocrine functions, or may effect the menstrual cycle. Indeed, it is

20 known that several of said receptors can be present at the surface of spermatozoids and can then find contraceptive application or could be used in the treatment/prevention of sterility/fertility. these receptors are also present in various neurolfactory neurons and can improve their

25 connection, especially upon the olfactory bulb or upon other tissue comprising said olfactory receptors.

[0041] They could be also used for the treatment or the prevention of various animal or human behaviours, such as stimulation and/or suppression of appetite,

30 stimulation and/or suppression of motivation and sexual attraction, stimulation and/or suppression of aggressivity, stimulation and/or suppression of alarm and defence behaviours, stimulation and/or suppression of territory and

trail-marking, stimulation and/or suppression of social regulation and recognition, stimulation and/or suppression of mother-child recognition, etc.

[0042] The screening method according to the
5 invention could be performed by well known methods to the person skilled in the art, preferably high-throughput screening, diagnostic and dosage devices based upon the method described in the International patent application WO00/02045 performed upon various solid supports such as
10 micro-titer plates or biochips according to known techniques by the person skilled in the art.

[0043] The present invention is also related to the molecules characterized and possibly recovered by said method, including the pharmaceutical composition comprising
15 a sufficient amount of said molecules and a pharmaceutically acceptable carrier or diluent for the preparation of a medicament in the prevention and/or the treatment of specific diseases.

[0044] A last aspect of the present invention is
20 related to a biosensor or any technical device comprising the receptors according to the invention for the detection of the specific above-mentioned compounds or molecules.

CLAIMS

1. Pheromone G-protein coupled receptor having an amino acid sequence which presents 95% sequence identity with the SEQ ID NO. 1.
- 5 2. G-protein coupled receptor having the amino acid sequence SEQ ID NO. 1 or a specific active portion thereof.
3. Polynucleotide encoding any of the amino acid sequences of the G-protein coupled receptor according
10 to claim 1 or 2.
4. Agonist, antagonist or inhibitor of the receptor or the polynucleotide according to any of the preceding claims.
5. Vector comprising the polynucleotide
15 according to the claim 3.
6. Cell transformed by the vector according to the claim 5.
7. Non-human mammal comprising a partial or total deletion of the polynucleotide according to the
20 claim 3 encoding the receptor according claim 1 or 2, preferably an non-human mammal comprising an homologous recombination "knock-out" of said polynucleotide or a transgenic non-human mammal overexpressing above natural level said polynucleotide.
- 25 8. Compound selected from the group consisting of agonist, antagonist or inhibitor of the receptor or the polynucleotide according to any of the claims 1 to 3.
9. Method for the screening (detection and
30 possibly recovering) of compounds which are known or not known to be agonists, antagonists or inhibitors of natural compounds to the receptor according to claim 1 or 6, said method comprising :

- contacting a cell or cell extract from the cell transfected with a vector according to the claim 5,
- possibly isolating a membrane fraction from the cell extract or the complete cell with a natural compound
- 5 binding to said receptor under conditions permitting binding of said compound to said receptor, possibly by the activation of a functional response, and
- detecting the presence of any such compound by means of a bioassay, preferably a modification in the production
- 10 of a second messenger or an increase in the receptor activity in the presence of another molecule (or compound) working as an agonist, antagonist or inhibitor of a natural known compound to the receptor and thereby recovering and determining whether said molecule (or
- 15 other compound) is able to work as an agonist, antagonist or inhibitor of the natural compound to its receptor.

10. Compound identified by the screening method according to the claim 9.

- 20 11. Pharmaceutical composition comprising an adequate pharmaceutical carrier and a sufficient amount of the receptor according to claim 1 or 2, the poly-nucleotide encoding said receptor according to the claim 3, the agonists, antagonists or inhibitors according to the claim
- 25 4 or the vectors according to the claim 5 or the cell according to the claim 6.

12. Use of the agonists, antagonists or inhibitors according to the claim 4 or the compound according to the claim 10 for the improvement, elimination
- 30 or substitution of an existing taste and/or a fragrance of (or in) food and/or cosmetrical products.

13. Use of the agonists, antagonists or inhibitors according to the claim 4 or the compound according to the claim 10 for the preparation of a

medicament in the treatment and/or the prevention of a disorder affecting a mammal, including a human, such as disorders in cell migration, sterility, psychotic and neurological disorders, including anxiety, schizophrenia, 5 maniac depression, depression, for promoting axonal growth, nerve cell connection and nerve regeneration, for modulating male and female endocrine functions, hormone production and menstrual cycle, for the prevention or the treatment by stimulation of several mammal (including 10 human) behaviours, such as stimulation or suppression of appetite, stimulation or suppression of sexual motivation and sexual attraction, stimulation or suppression of aggressivity and for promoting or suppressing chemical communication between organisms.

SEQUENCE LISTING

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Veithen, Alex

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agg ggc ctc tcc atc tgc acc ccc tgc ctc ctg agt gtg ctc cag gcc	432
Arg Gly Leu Ser Ile Cys Thr Pro Cys Leu Leu Ser Val Leu Gln Ala	
130 135 140	
atc atc agc ccc agc atc ttc tcc ttg gca aag ctc aaa cat cct tct	480
Ile Ile Ser Pro Ser Ile Phe Ser Leu Ala Lys Leu Lys His Pro Ser	
145 150 155 160	
gca agt cac atc tta gga ttc ttc ctt ttc tca tgg gtc ctc aac atg	528
Ala Ser His Ile Leu Gly Phe Phe Leu Phe Ser Trp Val Leu Asn Met	
165 170 175	
ttc att ggt gta atc ttc tgc tgt aca ctg cgg cta ccc cca gtg aaa	576
Phe Ile Gly Val Ile Phe Cys Cys Thr Leu Arg Leu Pro Pro Val Lys	
180 185 190	
cgg ggc cag tct tct gtt tgt cat aca gca ctg ttc ctt ttt gcc cat	624
Arg Gly Gln Ser Ser Val Cys His Thr Ala Leu Phe Leu Phe Ala His	
195 200 205	
gag cta cac cca cag gag act gtt ttt cac act aat gac ttt gag gga	672
Glu Leu His Pro Gln Glu Thr Val Phe His Thr Asn Asp Phe Glu Gly	
210 215 220	
tgt cac ctt tat agg gtt cat ggt cct ctc aag agg cta cat ggt gat	720
Cys His Leu Tyr Arg Val His Gly Pro Leu Lys Arg Leu His Gly Asp	
225 230 235 240	

tat ttt ata cag aca ata aga ggc tat ctc agt gcc ttc aca cag cca 768
 Tyr Phe Ile Gln Thr Ile Arg Gly Tyr Leu Ser Ala Phe Thr Gln Pro
 245 250 255

gcc tgt ccc cga gtc tca cca gtg aaa aga gcc tcc cag gct atc tta 816
 Ala Cys Pro Arg Val Ser Pro Val Lys Arg Ala Ser Gln Ala Ile Leu
 260 265 270

ctg ctg gtg agt ttt gtc ttc aca tac tgg gtg gac ttt acg ttc tca 864
 Leu Leu Val Ser Phe Val Phe Thr Tyr Trp Val Asp Phe Thr Phe Ser
 275 280 285

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 Phe Ser Gly Gly Val Thr Trp Ile Asn Asp Ser Leu Leu Val Trp Leu
 290 295 300

cag gtt att gtg gcc aat agc tat gcc gca att agt cct ttg atg cta 960
 Gln Val Ile Val Ala Asn Ser Tyr Ala Ala Ile Ser Pro Leu Met Leu
 305 310 315 320

att tat gct gat aac caa ata ttc aag act ctg caa atg tta tgg ttt 1008
 Ile Tyr Ala Asp Asn Gln Ile Phe Lys Thr Leu Gln Met Leu Trp Phe
 325 330 335

aaa tat ttg tct cct cca aag ctc atg ttg aaa ttt aat cgc caa tgt 1056
 Lys Tyr Leu Ser Pro Pro Lys Leu Met Leu Lys Phe Asn Arg Gln Cys
 340 345 350

ggc agt act aag aag tga 1074
 Gly Ser Thr Lys Lys
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Ser Leu Asp Leu Leu Leu Phe Ser Thr Asp Ile Leu Cys Phe Asn Phe
 20 25 30

Pro Ser Lys Met Ile Lys Leu Pro Gly Phe Ile Thr Ile Gln Ile Phe
 35 40 45

Phe Tyr Pro Gln Ala Ser Phe Gly Ile Ser Ala Asn Thr Ile Leu Leu
 50 55 60

Leu Tyr His Ile Phe Thr Phe Val Phe Ser His Arg Ser Lys Ser Ile
 65 70 75 80

Asp Met Ile Ile Ser His Leu Ser Leu Ile His Ile Leu Leu Leu Phe

	85		90		95
Thr Gln Ala Ile Leu Val Ser Leu Asp Phe Phe Gly Ser Gln Asn Thr	100		105		110
Gln Asp Asp Leu Arg Tyr Lys Val Ile Val Phe Leu Asn Lys Val Met	115		120		125
Arg Gly Leu Ser Ile Cys Thr Pro Cys Leu Leu Ser Val Leu Gln Ala	130		135		140
Ile Ile Ser Pro Ser Ile Phe Ser Leu Ala Lys Leu Lys His Pro Ser	145		150		155
Ala Ser His Ile Leu Gly Phe Phe Leu Phe Ser Trp Val Leu Asn Met	165		170		175
Phe Ile Gly Val Ile Phe Cys Cys Thr Leu Arg Leu Pro Pro Val Lys	180		185		190
Arg Gly Gln Ser Ser Val Cys His Thr Ala Leu Phe Leu Phe Ala His	195		200		205
Glu Leu His Pro Gln Glu Thr Val Phe His Thr Asn Asp Phe Glu Gly	210		215		220
Cys His Leu Tyr Arg Val His Gly Pro Leu Lys Arg Leu His Gly Asp	225		230		235
Tyr Phe Ile Gln Thr Ile Arg Gly Tyr Leu Ser Ala Phe Thr Gln Pro	245		250		255
Ala Cys Pro Arg Val Ser Pro Val Lys Arg Ala Ser Gln Ala Ile Leu	260		265		270
Leu Leu Val Ser Phe Val Phe Thr Tyr Trp Val Asp Phe Thr Phe Ser	275		280		285
Phe Ser Gly Gly Val Thr Trp Ile Asn Asp Ser Leu Leu Val Trp Leu	290		295		300
Gln Val Ile Val Ala Asn Ser Tyr Ala Ala Ile Ser Pro Leu Met Leu	305		310		315
Ile Tyr Ala Asp Asn Gln Ile Phe Lys Thr Leu Gln Met Leu Trp Phe	325		330		335

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Lys Tyr Leu Ser Pro Pro Lys Leu Met Leu Lys Phe Asn Arg Gln Cys
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Gly Ser Thr Lys Lys
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 cca aat tcc agc ttt gct ttt gta aat gaa ttt ata ctc caa ggt ttc 96
 Pro Asn Ser Ser Phe Ala Phe Val Asn Glu Phe Ile Leu Gln Gly Phe
 20 25 30
 tct tgt gag tgg aca att cag atc ttc ctc ttc tca ctc ttt act aca 144
 Ser Cys Glu Trp Thr Ile Gln Ile Phe Leu Phe Ser Leu Phe Thr Thr
 35 40 45
 aca tat gca ctg act ata aca ggg aat gga gcc att gct ttt gtc ctg 192
 Thr Tyr Ala Leu Thr Ile Thr Gly Asn Gly Ala Ile Ala Phe Val Leu
 50 55 60
 tgg tgt gac cgg cga ctt cac act ccc atg tac atg ttc ctg gga aat 240
 Trp Cys Asp Arg Arg Leu His Thr Pro Met Tyr Met Phe Leu Gly Asn
 65 70 75 80
 ttc tcc ttt tta gag ata tgg tat gtc tct tct aca gtt ccc aag atg 288
 Phe Ser Phe Leu Glu Ile Trp Tyr Val Ser Ser Thr Val Pro Lys Met
 85 90 95
 ttg gtc aac ttc ctt tca gag aaa aaa aac atc tcc ttt gct gga tgt 336
 Leu Val Asn Phe Leu Ser Glu Lys Lys Asn Ile Ser Phe Ala Gly Cys
 100 105 110
 ttt ctc cag ttt tat ttc ttc ttc tct ttg ggt aca tca gaa tgc ttg 384
 Phe Leu Gln Phe Tyr Phe Phe Ser Leu Gly Thr Ser Glu Cys Leu
 115 120 125
 ctt ttg act gtg atg gcc ttt gat cag tac ctt gct atc tgc cgt ccc 432
 Leu Leu Thr Val Met Ala Phe Asp Gln Tyr Leu Ala Ile Cys Arg Pro
 130 135 140
 ttg ctc tat cct aat atc atg act ggg cat ctc tat gcc aaa ctg gtc 480
 Leu Leu Tyr Pro Asn Ile Met Thr Gly His Leu Tyr Ala Lys Leu Val
 145 150 155 160

ata ctg tgc tgg gtt tgt gga ttt ctg tgg ttc ctg atc ccc att gtt 528
 Ile Leu Cys Trp Val Cys Gly Phe Leu Trp Phe Leu Ile Pro Ile Val
 165 170 175

ctc atc tct cag atg ccc ttc tgt ggc cca aac att att gac cat gtt 576
 Leu Ile Ser Gln Met Pro Phe Cys Gly Pro Asn Ile Ile Asp His Val
 180 185 190

gtg tgt gac cca ggg cca cga ttt gca ttg gat tgt gtt tct gcc cca 624
 Val Cys Asp Pro Gly Pro Arg Phe Ala Leu Asp Cys Val Ser Ala Pro
 195 200 205

aga atc caa ctg ttt tgc tac act cta agc tca tta gtt att ttt ggt 672
 Arg Ile Gln Leu Phe Cys Tyr Thr Leu Ser Ser Leu Val Ile Phe Gly
 210 215 220

aac ttc ctc ttt att att gga tcc tat act ctt gtc ctg aaa gct atg 720
 Asn Phe Leu Phe Ile Ile Gly Ser Tyr Thr Leu Val Leu Lys Ala Met
 225 230 235 240

ttg ggt atg cct tca agc act ggg aga cat aag gcc ttc tct acc tgt 768
 Leu Gly Met Pro Ser Ser Thr Gly Arg His Lys Ala Phe Ser Thr Cys
 245 250 255

ggg tct cat ttg gct gtg gta tca ctg tgc tat agc tct ctt atg gtc 816
 Gly Ser His Leu Ala Val Val Ser Leu Cys Tyr Ser Ser Leu Met Val
 260 265 270

atg tat gtg agc cca gga ctc gga cat tct aca ggg atg cag aaa att 864
 Met Tyr Val Ser Pro Gly Leu Gly His Ser Thr Gly Met Gln Lys Ile
 275 280 285

gaa act ttg ttc tat gct atg gtg acc cca ctc ttc aat ccc ctt atc 912
 Glu Thr Leu Phe Tyr Ala Met Val Thr Pro Leu Phe Asn Pro Leu Ile
 290 295 300

tat agc ctc cag aat aag gag ata aag gca gcc ctg agg aaa gtt ctg 960
 Tyr Ser Leu Gln Asn Lys Glu Ile Lys Ala Ala Leu Arg Lys Val Leu
 305 310 315 320

ggg agt tcc aac ata atc taa 981
 Gly Ser Ser Asn Ile Ile
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Ser Cys Glu Trp Thr Ile Gln Ile Phe Leu Phe Ser Leu Phe Thr Thr
 35 40 45

Thr Tyr Ala Leu Thr Ile Thr Gly Asn Gly Ala Ile Ala Phe Val Leu
 50 55 60

Trp Cys Asp Arg Arg Leu His Thr Pro Met Tyr Met Phe Leu Gly Asn
 65 70 75 80

Phe Ser Phe Leu Glu Ile Trp Tyr Val Ser Ser Thr Val Pro Lys Met
 85 90 95

Leu Val Asn Phe Leu Ser Glu Lys Lys Asn Ile Ser Phe Ala Gly Cys
 100 105 110

Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly Thr Ser Glu Cys Leu
 115 120 125

Leu Leu Thr Val Met Ala Phe Asp Gln Tyr Leu Ala Ile Cys Arg Pro
 130 135 140

Leu Leu Tyr Pro Asn Ile Met Thr Gly His Leu Tyr Ala Lys Leu Val
 145 150 155 160

Ile Leu Cys Trp Val Cys Gly Phe Leu Trp Phe Leu Ile Pro Ile Val
 165 170 175

Leu Ile Ser Gln Met Pro Phe Cys Gly Pro Asn Ile Ile Asp His Val
 180 185 190

Val Cys Asp Pro Gly Pro Arg Phe Ala Leu Asp Cys Val Ser Ala Pro
 195 200 205

Arg Ile Gln Leu Phe Cys Tyr Thr Leu Ser Ser Leu Val Ile Phe Gly
 210 215 220

Asn Phe Leu Phe Ile Ile Gly Ser Tyr Thr Leu Val Leu Lys Ala Met
 225 230 235 240

Leu Gly Met Pro Ser Ser Thr Gly Arg His Lys Ala Phe Ser Thr Cys
 245 250 255

Gly Ser His Leu Ala Val Val Ser Leu Cys Tyr Ser Ser Leu Met Val
 260 265 270

Met Tyr Val Ser Pro Gly Leu Gly His Ser Thr Gly Met Gln Lys Ile

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cac tat ttc tgt gac atg gca cct gtt atc aag tta gcc tgc act gac His Tyr Phe Cys Asp Met Ala Pro Val Ile Lys Leu Ala Cys Thr Asp 180 185 190			576
acc cat gtg aaa gag ctg gct tta ttt agc ctc agc atc ctg gta att Thr His Val Lys Glu Leu Ala Leu Phe Ser Leu Ser Ile Leu Val Ile 195 200 205			624
atg gtg cct ttt ctg tta att ctc ata tcc tat ggc ttc ata gtt aac Met Val Pro Phe Leu Leu Ile Leu Ile Ser Tyr Gly Phe Ile Val Asn 210 215 220			672
acc atc ctg aag atc ccc tca gct gag ggc aag aag gcc ttt gtc acc Thr Ile Leu Lys Ile Pro Ser Ala Glu Gly Lys Lys Ala Phe Val Thr 225 230 235 240			720
tgt gcc tca cat ctc act gtg gtc ttt gtc cac tat ggc tgt gcc tct Cys Ala Ser His Leu Thr Val Val Phe Val His Tyr Gly Cys Ala Ser 245 250 255			768
atc atc tat ctg cgg ccc aag tcc aag tct gcc tca gac aag gat cag Ile Ile Tyr Leu Arg Pro Lys Ser Lys Ser Ala Ser Asp Lys Asp Gln 260 265 270			816
ttg gtg gca gtg acc tac aca gtg gtt act ccc tta ctt aat cct ctt Leu Val Ala Val Thr Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Leu 275 280 285			864
gtc tac agt ctg agg aac aaa gag gta aaa act gca ttg aaa aga gtt Val Tyr Ser Leu Arg Asn Lys Glu Val Lys Thr Ala Leu Lys Arg Val 290 295 300			912
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20 25 30

Leu Leu Leu Tyr Leu Thr Ile Leu Val Ala Asn Val Thr Ile Met Ala
35 40 45

Val Ile Arg Phe Ser Trp Thr Leu His Thr Pro Met Tyr Gly Phe Leu
50 55 60

Phe Ile Leu Ser Phe Ser Glu Ser Cys Tyr Thr Phe Val Ile Ile Pro
65 70 75 80

Gln Leu Leu Val His Leu Leu Ser Asp Thr Lys Thr Ile Ser Phe Met
85 90 95

Ala Cys Ala Thr Gln Leu Phe Phe Phe Leu Gly Phe Ala Cys Thr Asn
100 105 110

Cys Leu Leu Ile Ala Val Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys
115 120 125

His Pro Leu Arg Tyr Thr Leu Ile Ile Asn Lys Arg Leu Gly Leu Glu
130 135 140

Leu Ile Ser Leu Ser Gly Ala Thr Gly Phe Phe Ile Ala Leu Val Ala
145 150 155 160

Thr Asn Leu Ile Cys Asp Met Arg Phe Cys Gly Pro Asn Arg Val Asn
165 170 175

His Tyr Phe Cys Asp Met Ala Pro Val Ile Lys Leu Ala Cys Thr Asp
180 185 190

Thr His Val Lys Glu Leu Ala Leu Phe Ser Leu Ser Ile Leu Val Ile
195 200 205

Met Val Pro Phe Leu Leu Ile Leu Ile Ser Tyr Gly Phe Ile Val Asn
210 215 220

Thr Ile Leu Lys Ile Pro Ser Ala Glu Gly Lys Lys Ala Phe Val Thr
225 230 235 240

Cys Ala Ser His Leu Thr Val Val Phe Val His Tyr Gly Cys Ala Ser
245 250 255

Ile Ile Tyr Leu Arg Pro Lys Ser Lys Ser Ala Ser Asp Lys Asp Gln
260 265 270

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Leu Val Ala Val Thr Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Leu
 275 280 285

Val Tyr Ser Leu Arg Asn Lys Glu Val Lys Thr Ala Leu Lys Arg Val
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Leu Gly Met Pro Val Ala Thr Lys Met Ser
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 Phe Ser Asp Arg Pro Trp Leu Glu Phe Pro Leu Leu Val Val Phe Leu
 20 25 30
 att tct tac act gtg acc atc ttt ggc aat ctg acc att att cta gtg 144
 Ile Ser Tyr Thr Val Thr Ile Phe Gly Asn Leu Thr Ile Ile Leu Val
 35 40 45
 tca cgc ctg gac acc aaa ctt cat acc ccc atg tat ttt ttt ctt acc 192
 Ser Arg Leu Asp Thr Lys Leu His Thr Pro Met Tyr Phe Phe Leu Thr
 50 55 60
 aat cta tca ctc ctg gat ctt tgt tac acc aca tgt aca gtc cca caa 240
 Asn Leu Ser Leu Leu Asp Leu Cys Tyr Thr Thr Cys Thr Val Pro Gln
 65 70 75 80
 atg cta gta aat tta tgc agc atc agg aaa gta atc agt tat cgt ggc 288
 Met Leu Val Asn Leu Cys Ser Ile Arg Lys Val Ile Ser Tyr Arg Gly
 85 90 95
 tgt gta gcc cag ctt ttc ata ttt ctg gcc ttg ggg gct act gaa tat 336
 Cys Val Ala Gln Leu Phe Ile Phe Leu Ala Leu Gly Ala Thr Glu Tyr
 100 105 110
 ctt ctc ctg gcc gtc atg tcc ttt gat agg ttt gta gct att tgt cgg 384
 Leu Leu Leu Ala Val Met Ser Phe Asp Arg Phe Val Ala Ile Cys Arg
 115 120 125
 cct ctc cat tac tca gtt atc atg cac cag aga ctc tgc ctc cag ttg 432
 Pro Leu His Tyr Ser Val Ile Met His Gln Arg Leu Cys Leu Gln Leu
 130 135 140
 gca gct gca tcc tgg gtt act ggt ttt agt aac tca gtg tgg ttg tct 480

Ala Ala Ala Ser Trp Val Thr Gly Phe Ser Asn Ser Val Trp Leu Ser
 145 150 155 160

acc ctg act ctc cag ctg cca ctc tgt gac ccc tat gtg ata gat cac 528
 Thr Leu Thr Leu Gln Leu Pro Leu Cys Asp Pro Tyr Val Ile Asp His
 165 170 175

ttt ctc tgt gaa gtc cct gca ctg ctc aag tta tct tgt gtt gag aca 576
 Phe Leu Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Val Glu Thr
 180 185 190

aca gca aat gag gct gaa cta ttc ctt gtc agt gag ctc ttc cat cta 624
 Thr Ala Asn Glu Ala Glu Leu Phe Leu Val Ser Glu Leu Phe His Leu
 195 200 205

ata ccc ctg aca ctc atc ctt ata tca tat gct ttt att gtc cga gca 672
 Ile Pro Leu Thr Leu Ile Leu Ile Ser Tyr Ala Phe Ile Val Arg Ala
 210 215 220

gta ttg agg ata cag tct gct gaa ggt cga caa aaa gca ttt ggg aca 720
 Val Leu Arg Ile Gln Ser Ala Glu Gly Arg Gln Lys Ala Phe Gly Thr
 225 230 235 240

tgt ggt tcc cat cta att gtg gtg tct ctt ttt tat agt aca gcc gtc 768
 Cys Gly Ser His Leu Ile Val Val Ser Leu Phe Tyr Ser Thr Ala Val
 245 250 255

tct gtg tac ctg caa cca cct tcg ccc agc tcc aag gac caa gga aag 816
 Ser Val Tyr Leu Gln Pro Pro Ser Pro Ser Ser Lys Asp Gln Gly Lys
 260 265 270

atg gtt tct ctc ttc tat gga atc att gca ccc atg ctg aat ccc ctt 864
 Met Val Ser Leu Phe Tyr Gly Ile Ile Ala Pro Met Leu Asn Pro Leu
 275 280 285

ata tat aca ctt agg aac aag gag gta aag gaa ggc ttt aaa agg ttg 912
 Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Glu Gly Phe Lys Arg Leu
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gtt gca aga gtc ttc tta atc aag aaa taa 942
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Ile Ser Tyr Thr Val Thr Ile Phe Gly Asn Leu Thr Ile Ile Leu Val
 35 40 45

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Ser Arg Leu Asp Thr Lys Leu His Thr Pro Met Tyr Phe Phe Leu Thr
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Asn Leu Ser Leu Leu Asp Leu Cys Tyr Thr Thr Cys Thr Val Pro Gln
65 70 75 80

Met Leu Val Asn Leu Cys Ser Ile Arg Lys Val Ile Ser Tyr Arg Gly
85 90 95

Cys Val Ala Gln Leu Phe Ile Phe Leu Ala Leu Gly Ala Thr Glu Tyr
100 105 110

Leu Leu Leu Ala Val Met Ser Phe Asp Arg Phe Val Ala Ile Cys Arg
115 120 125

Pro Leu His Tyr Ser Val Ile Met His Gln Arg Leu Cys Leu Gln Leu
130 135 140

Ala Ala Ala Ser Trp Val Thr Gly Phe Ser Asn Ser Val Trp Leu Ser
145 150 155 160

Thr Leu Thr Leu Gln Leu Pro Leu Cys Asp Pro Tyr Val Ile Asp His
165 170 175

Phe Leu Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Val Glu Thr
180 185 190

Thr Ala Asn Glu Ala Glu Leu Phe Leu Val Ser Glu Leu Phe His Leu
195 200 205

Ile Pro Leu Thr Leu Ile Leu Ile Ser Tyr Ala Phe Ile Val Arg Ala
210 215 220

Val Leu Arg Ile Gln Ser Ala Glu Gly Arg Gln Lys Ala Phe Gly Thr
225 230 235 240

Cys Gly Ser His Leu Ile Val Val Ser Leu Phe Tyr Ser Thr Ala Val
245 250 255

Ser Val Tyr Leu Gln Pro Pro Ser Pro Ser Ser Lys Asp Gln Gly Lys
260 265 270

Met Val Ser Leu Phe Tyr Gly Ile Ile Ala Pro Met Leu Asn Pro Leu
275 280 285

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Val Ala Arg Val Phe Leu Ile Lys Lys
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 Phe Ser Gly Tyr Pro Ala Leu Glu His Leu Leu Phe Pro Leu Cys Ser
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 Ala Met Tyr Leu Val Thr Leu Leu Gly Asn Thr Ala Ile Met Ala Val
 35 40 45
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 Ser Val Leu Asp Ile His Leu His Thr Pro Val Tyr Phe Phe Leu Gly
 50 55 60
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 Asn Leu Ser Thr Leu Asp Ile Cys Tyr Thr Pro Thr Phe Val Pro Leu
 65 70 75 80
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 Met Leu Val His Leu Leu Ser Ser Arg Lys Thr Ile Ser Phe Ala Val
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 Cys Ala Ile Gln Met Cys Leu Ser Leu Ser Thr Gly Ser Thr Glu Cys
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 Leu Leu Leu Ala Ile Thr Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gln
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 Pro Leu Arg Tyr His Val Leu Met Ser His Arg Leu Cys Val Leu Leu
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 Met Gly Ala Ala Trp Val Leu Cys Leu Leu Lys Ser Val Thr Glu Met
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Val Ile Ser Met Arg Leu Pro Phe Cys Gly His His Val Val Ser His
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ttc acc tgc aag atc ctg gca gtg ctg aag ctg gca tgc ggc aac acg 576
Phe Thr Cys Lys Ile Leu Ala Val Leu Lys Leu Ala Cys Gly Asn Thr
180 185 190

tcg gtc agc gaa gac ttc ctg ctg gcg ggc tcc atc ctg ctg ctg cct 624
Ser Val Ser Glu Asp Phe Leu Leu Ala Gly Ser Ile Leu Leu Leu Pro
195 200 205

gta ccc ctg gca ttc atc tgc ctg tcc tac ttg ctc atc ctg gcc acc 672
Val Pro Leu Ala Phe Ile Cys Leu Ser Tyr Leu Leu Ile Leu Ala Thr
210 215 220

atc ctg agg gtg ccc tcg gcc gcc agg tgc tgc aaa gcc ttc tcc acc 720
Ile Leu Arg Val Pro Ser Ala Ala Arg Cys Cys Lys Ala Phe Ser Thr
225 230 235 240

tgc ttg gca cac ctg gct gta gtg ctg ctt ttc tac ggc acc atc atc 768
Cys Leu Ala His Leu Ala Val Val Leu Leu Phe Tyr Gly Thr Ile Ile
245 250 255

ttc atg tac ttg aag ccc aag agt aag gaa gcc cac atc tct gat gag 816
Phe Met Tyr Leu Lys Pro Lys Ser Lys Glu Ala His Ile Ser Asp Glu
260 265 270

gtc ttc aca gtc ctc tat gcc atg gtc acg acc atg ctg aac ccc acc 864
Val Phe Thr Val Leu Tyr Ala Met Val Thr Thr Met Leu Asn Pro Thr
275 280 285

atc tac agc ctg agg aac aag gag gtg aag gag gcc gcc agg aag gtg 912
Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Ala Arg Lys Val
290 295 300

tgg ggc agg agt cgg gcc tcc agg tga 939
Trp Gly Arg Ser Arg Ala Ser Arg
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Met Glu Pro Leu Asn Arg Thr Glu Val Ser Glu Phe Phe Leu Lys Gly
1 5 10 15

Phe Ser Gly Tyr Pro Ala Leu Glu His Leu Leu Phe Pro Leu Cys Ser
20 25 30

Ala Met Tyr Leu Val Thr Leu Leu Gly Asn Thr Ala Ile Met Ala Val
35 40 45

Ser Val Leu Asp Ile His Leu His Thr Pro Val Tyr Phe Phe Leu Gly

50	55	60
Asn Leu Ser Thr Leu Asp Ile Cys Tyr Thr Pro Thr Phe Val Pro Leu		
65	70	75 80
Met Leu Val His Leu Leu Ser Ser Arg Lys Thr Ile Ser Phe Ala Val		
	85	90 95
Cys Ala Ile Gln Met Cys Leu Ser Leu Ser Thr Gly Ser Thr Glu Cys		
	100	105 110
Leu Leu Leu Ala Ile Thr Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gln		
	115	120 125
Pro Leu Arg Tyr His Val Leu Met Ser His Arg Leu Cys Val Leu Leu		
	130	135 140
Met Gly Ala Ala Trp Val Leu Cys Leu Leu Lys Ser Val Thr Glu Met		
	145	150 155 160
Val Ile Ser Met Arg Leu Pro Phe Cys Gly His His Val Val Ser His		
	165	170 175
Phe Thr Cys Lys Ile Leu Ala Val Leu Lys Leu Ala Cys Gly Asn Thr		
	180	185 190
Ser Val Ser Glu Asp Phe Leu Leu Ala Gly Ser Ile Leu Leu Leu Pro		
	195	200 205
Val Pro Leu Ala Phe Ile Cys Leu Ser Tyr Leu Leu Ile Leu Ala Thr		
	210	215 220
Ile Leu Arg Val Pro Ser Ala Ala Arg Cys Cys Lys Ala Phe Ser Thr		
	225	230 235 240
Cys Leu Ala His Leu Ala Val Val Leu Leu Phe Tyr Gly Thr Ile Ile		
	245	250 255
Phe Met Tyr Leu Lys Pro Lys Ser Lys Glu Ala His Ile Ser Asp Glu		
	260	265 270
Val Phe Thr Val Leu Tyr Ala Met Val Thr Thr Met Leu Asn Pro Thr		
	275	280 285
Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Ala Arg Lys Val		
	290	295 300

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Trp Gly Arg Ser Arg Ala Ser Arg
305 310

<210> 13
<211> 1083
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(1080)
<223>

<400> 13 48
atg agc atc caa aag acg tat ctg gag gga gat ttt gtc ttt cct gtg
Met Ser Ile Gln Lys Thr Tyr Leu Glu Gly Asp Phe Val Phe Pro Val
1 5 10 15
agc agc agc agc ttc cta cgg acc ctg ctg gag ccc cag ctc gga tca 96
Ser Ser Ser Ser Phe Leu Arg Thr Leu Leu Glu Pro Gln Leu Gly Ser
20 25 30
gcc ctt ctg aca gca atg aat gct tgc tgc ctg ccc tct gtt cag 144
Ala Leu Leu Thr Ala Met Asn Ala Ser Cys Cys Leu Pro Ser Val Gln
35 40 45
cca aca ctg cct aat ggc tgc gag cac ctc caa gcc cct ttc ttc agc 192
Pro Thr Leu Pro Asn Gly Ser Glu His Leu Gln Ala Pro Phe Phe Ser
50 55 60
aac cag agc agc agc gcc ttc tgt gag cag gtc ttc atc aag ccc gag 240
Asn Gln Ser Ser Ser Ala Phe Cys Glu Gln Val Phe Ile Lys Pro Glu
65 70 75 80
gtt ttc ctg tct ctg ggc atc gtc agt ctg ctg gaa aac atc ctg gtt 288
Val Phe Leu Ser Leu Gly Ile Val Ser Leu Leu Glu Asn Ile Leu Val
85 90 95
atc ctg gcc gtg gtc agg aac ggc aac ctg cac tcc ccg atg tac ttc 336
Ile Leu Ala Val Val Arg Asn Gly Asn Leu His Ser Pro Met Tyr Phe
100 105 110
ttt ctc tgc agc ctg gcg gtg gcc gac atg ctg gta agt gtg tcc aat 384
Phe Leu Cys Ser Leu Ala Val Ala Asp Met Leu Val Ser Val Ser Asn
115 120 125
gcc ctg gag acc atc atg atc gcc atc gtc cac agc gac tac ctg acc 432
Ala Leu Glu Thr Ile Met Ile Ala Ile Val His Ser Asp Tyr Leu Thr
130 135 140
ttc gag gac cag ttt atc cag cac atg gac aac atc ttc gac tcc atg 480
Phe Glu Asp Gln Phe Ile Gln His Met Asp Asn Ile Phe Asp Ser Met
145 150 155 160
atc tgc atc tcc ctg gtg gcc tcc atc tgc aac ctc ctg gcc atc gcc 528
Ile Cys Ile Ser Leu Val Ala Ser Ile Cys Asn Leu Leu Ala Ile Ala
165 170 175

gtc gac agg tac gtc acc atc ttt tac gcg ctc cgc tac cac agc atc 576
 Val Asp Arg Tyr Val Thr Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile
 180 185 190

atg acc gtg agg aag gcc ctc acc ttg atc gtg gcc atc tgg gtc tgc 624
 Met Thr Val Arg Lys Ala Leu Thr Leu Ile Val Ala Ile Trp Val Cys
 195 200 205

tgc gcc gtc tgt gcc gtg gtg ttc atc gtc tac tcg gag agc aaa atg 672
 Cys Gly Val Cys Gly Val Val Phe Ile Val Tyr Ser Glu Ser Lys Met
 210 215 220

gtc att gtg tgc ctc atc acc atg ttc ttc gcc atg atg ctc ctc atg 720
 Val Ile Val Cys Leu Ile Thr Met Phe Phe Ala Met Met Leu Leu Met
 225 230 235 240

gcc acc ctc tac gtg cac atg ttc ctc ttt gcg cgg ctg cac gtc aag 768
 Gly Thr Leu Tyr Val His Met Phe Leu Phe Ala Arg Leu His Val Lys
 245 250 255

cgc ata gca gca ctg cca cct gcc gac ggg gtg gcc cca cag caa cac 816
 Arg Ile Ala Ala Leu Pro Pro Ala Asp Gly Val Ala Pro Gln Gln His
 260 265 270

tca tgc atg aag ggg gca gtc acc atc acc att ctc ctg gcc gtg ttc 864
 Ser Cys Met Lys Gly Ala Val Thr Ile Thr Ile Leu Leu Gly Val Phe
 275 280 285

atc ttc tgc tgg gcc ccc ttc ttc ctc cac ctg gtc ctc atc atc acc 912
 Ile Phe Cys Trp Ala Pro Phe Phe Leu His Leu Val Leu Ile Ile Thr
 290 295 300

tgc ccc acc aac ccc tac tgc atc tgc tac act gcc cac ttc aac acc 960
 Cys Pro Thr Asn Pro Tyr Cys Ile Cys Tyr Thr Ala His Phe Asn Thr
 305 310 315 320

tac ctg gtc ctc atc atg tgc aac tcc gtc atc gac cca ctc atc tac 1008
 Tyr Leu Val Leu Ile Met Cys Asn Ser Val Ile Asp Pro Leu Ile Tyr
 325 330 335

gct ttc cgg agc ctg gaa ttg cgc aac acc ttt agg gag att ctc tgt 1056
 Ala Phe Arg Ser Leu Glu Leu Arg Asn Thr Phe Arg Glu Ile Leu Cys
 340 345 350

gcc tgc aac gcc atg aac ttg gga tag 1083
 Gly Cys Asn Gly Met Asn Leu Gly
 355 360

<210> 14
 <211> 360
 <212> PRT
 <213> Homo Sapiens

<400> 14

Met Ser Ile Gln Lys Thr Tyr Leu Glu Gly Asp Phe Val Phe Pro Val
 1 5 10 15

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Ser Ser Ser Ser Phe Leu Arg Thr Leu Leu Glu Pro Gln Leu Gly Ser
20 25 30

Ala Leu Leu Thr Ala Met Asn Ala Ser Cys Cys Leu Pro Ser Val Gln
35 40 45

Pro Thr Leu Pro Asn Gly Ser Glu His Leu Gln Ala Pro Phe Phe Ser
50 55 60

Asn Gln Ser Ser Ser Ala Phe Cys Glu Gln Val Phe Ile Lys Pro Glu
65 70 75 80

Val Phe Leu Ser Leu Gly Ile Val Ser Leu Leu Glu Asn Ile Leu Val
85 90 95

Ile Leu Ala Val Val Arg Asn Gly Asn Leu His Ser Pro Met Tyr Phe
100 105 110

Phe Leu Cys Ser Leu Ala Val Ala Asp Met Leu Val Ser Val Ser Asn
115 120 125

Ala Leu Glu Thr Ile Met Ile Ala Ile Val His Ser Asp Tyr Leu Thr
130 135 140

Phe Glu Asp Gln Phe Ile Gln His Met Asp Asn Ile Phe Asp Ser Met
145 150 155 160

Ile Cys Ile Ser Leu Val Ala Ser Ile Cys Asn Leu Leu Ala Ile Ala
165 170 175

Val Asp Arg Tyr Val Thr Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile
180 185 190

Met Thr Val Arg Lys Ala Leu Thr Leu Ile Val Ala Ile Trp Val Cys
195 200 205

Cys Gly Val Cys Gly Val Val Phe Ile Val Tyr Ser Glu Ser Lys Met
210 215 220

Val Ile Val Cys Leu Ile Thr Met Phe Phe Ala Met Met Leu Leu Met
225 230 235 240

Gly Thr Leu Tyr Val His Met Phe Leu Phe Ala Arg Leu His Val Lys
245 250 255

Arg Ile Ala Ala Leu Pro Pro Ala Asp Gly Val Ala Pro Gln Gln His

260 265 270
 Ser Cys Met Lys Gly Ala Val Thr Ile Thr Ile Leu Leu Gly Val Phe
 275 280 285
 Ile Phe Cys Trp Ala Pro Phe Phe Leu His Leu Val Leu Ile Ile Thr
 290 295 300
 Cys Pro Thr Asn Pro Tyr Cys Ile Cys Tyr Thr Ala His Phe Asn Thr
 305 310 315 320
 Tyr Leu Val Leu Ile Met Cys Asn Ser Val Ile Asp Pro Leu Ile Tyr
 325 330 335
 Ala Phe Arg Ser Leu Glu Leu Arg Asn Thr Phe Arg Glu Ile Leu Cys
 340 345 350
 Gly Cys Asn Gly Met Asn Leu Gly
 355 360

<210> 15
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

<400> 15
 atg aaa ggg gca aac ctg agc caa ggg atg gag ttt gag ctc ttg ggc 48
 Met Lys Gly Ala Asn Leu Ser Gln Gly Met Glu Phe Glu Leu Leu Gly
 1 5 10 15
 ctc acc act gac ccc cag ctg cag agg ctg ctc ttc gtg gtg ttc ctg 96
 Leu Thr Thr Asp Pro Gln Leu Gln Arg Leu Leu Phe Val Val Phe Leu
 20 25 30
 ggc atg tac aca gcc act ctg ctg ggg aac ctg gtc atg ttc ctc ctg 144
 Gly Met Tyr Thr Ala Thr Leu Leu Gly Asn Leu Val Met Phe Leu Leu
 35 40 45
 atc cat gtg agt gcc acc ctg cac aca ccc atg tac tcc ctc ctg aag 192
 Ile His Val Ser Ala Thr Leu His Thr Pro Met Tyr Ser Leu Leu Lys
 50 55 60
 agc ctc tcc ttc ttg gat ttc tgc tac tcc tcc acg gtt gtg ccc cag 240
 Ser Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Thr Val Val Pro Gln
 65 70 75 80
 acc ctg gtg aac ttc ttg gcc aag agg aaa gtg atc tct tat ttt ggc 288
 Thr Leu Val Asn Phe Leu Ala Lys Arg Lys Val Ile Ser Tyr Phe Gly

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85	90	95	
tgc atg act cag atg ttc ttc tat gcg ggt ttt gcc acc agt gag tgc			336
Cys Met Thr Gln Met Phe Phe Tyr Ala Gly Phe Ala Thr Ser Glu Cys	105	110	
100			
tat ctc atc gct gcc atg gcc tat gac cgc tat gcc gct att tgt aac			384
Tyr Leu Ile Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Asn	120	125	
115			
ccc ctg ctc tac tca acc atc atg tct cct gag gtc tgt gcc tcg ctg			432
Pro Leu Leu Tyr Ser Thr Ile Met Ser Pro Glu Val Cys Ala Ser Leu	135	140	
130			
att gtg ggc tcc tac agt gca gga ttc ctc aat tct ctt atc cac act			480
Ile Val Gly Ser Tyr Ser Ala Gly Phe Leu Asn Ser Leu Ile His Thr	150	155	
145			
ggc tgt atc ttt agt ctg aaa ttc tgc ggt gct cat gtc gtc act cac			528
Gly Cys Ile Phe Ser Leu Lys Phe Cys Gly Ala His Val Val Thr His	165	170	
175			
ttc ttc tgt gat ggg cca ccc atc ctg tcc ttg tct tgt gta gac acc			576
Phe Phe Cys Asp Gly Pro Pro Ile Leu Ser Leu Ser Cys Val Asp Thr	180	185	
190			
tca ctg tgt gag atc ctg ctc ttc att ttt gct ggt ttc aac ctt ttg			624
Ser Leu Cys Glu Ile Leu Leu Phe Ile Phe Ala Gly Phe Asn Leu Leu	195	200	
205			
agc tgc acc ctc acc atc ttg atc tcc tac ttc tta att ctc aac acc			672
Ser Cys Thr Leu Thr Ile Leu Ile Ser Tyr Phe Leu Ile Leu Asn Thr	215	220	
220			
atc ctg aaa atg agc tcg gcc cag ggc agg ttt aag gca ttt tcc acc			720
Ile Leu Lys Met Ser Ser Ala Gln Gly Arg Phe Lys Ala Phe Ser Thr	230	235	
240			
tgt gca tcc cac ctc act gcc atc tgc ctc ttc ttt ggc aca aca ctt			768
Cys Ala Ser His Leu Thr Ala Ile Cys Leu Phe Phe Gly Thr Thr Leu	245	250	
255			
ttt atg tac ctg cgc ccc agg tcc agc tac tcc ttg acc cag gac cgc			816
Phe Met Tyr Leu Arg Pro Arg Ser Ser Tyr Ser Leu Thr Gln Asp Arg	260	265	
270			
aca gtt gct gtc atc tac aca gtg gtg atc cca gtg ctg aac ccc ctc			864
Thr Val Ala Val Ile Tyr Thr Val Val Ile Pro Val Leu Asn Pro Leu	275	280	
285			
atg tac tct ttg aga aac aag gat gtg aag aaa gct tta ata aag gtt			912
Met Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu Ile Lys Val	295	300	
290			
tggt ggt agg aaa aca atg gaa tga			936
Trp Gly Arg Lys Thr Met Glu	310		
305			

<210> 16

<211> 311

<212> PRT

<213> Homo Sapiens

<400> 16

Met Lys Gly Ala Asn Leu Ser Gln Gly Met Glu Phe Glu Leu Leu Gly
 1 5 10 15

Leu Thr Thr Asp Pro Gln Leu Gln Arg Leu Leu Phe Val Val Phe Leu
 20 25 30

Gly Met Tyr Thr Ala Thr Leu Leu Gly Asn Leu Val Met Phe Leu Leu
 35 40 45

Ile His Val Ser Ala Thr Leu His Thr Pro Met Tyr Ser Leu Leu Lys
 50 55 60

Ser Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Thr Val Val Pro Gln
 65 70 75 80

Thr Leu Val Asn Phe Leu Ala Lys Arg Lys Val Ile Ser Tyr Phe Gly
 85 90 95

Cys Met Thr Gln Met Phe Phe Tyr Ala Gly Phe Ala Thr Ser Glu Cys
 100 105 110

Tyr Leu Ile Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Asn
 115 120 125

Pro Leu Leu Tyr Ser Thr Ile Met Ser Pro Glu Val Cys Ala Ser Leu
 130 135 140

Ile Val Gly Ser Tyr Ser Ala Gly Phe Leu Asn Ser Leu Ile His Thr
 145 150 155 160

Gly Cys Ile Phe Ser Leu Lys Phe Cys Gly Ala His Val Val Thr His
 165 170 175

Phe Phe Cys Asp Gly Pro Pro Ile Leu Ser Leu Ser Cys Val Asp Thr
 180 185 190

Ser Leu Cys Glu Ile Leu Leu Phe Ile Phe Ala Gly Phe Asn Leu Leu
 195 200 205

Ser Cys Thr Leu Thr Ile Leu Ile Ser Tyr Phe Leu Ile Leu Asn Thr
 210 215 220

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Ile Leu Lys Met Ser Ser Ala Gln Gly Arg Phe Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Leu Thr Ala Ile Cys Leu Phe Phe Gly Thr Thr Leu
 245 250 255

Phe Met Tyr Leu Arg Pro Arg Ser Ser Tyr Ser Leu Thr Gln Asp Arg
 260 265 270

Thr Val Ala Val Ile Tyr Thr Val Val Ile Pro Val Leu Asn Pro Leu
 275 280 285

Met Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu Ile Lys Val
 290 295 300

Trp Gly Arg Lys Thr Met Glu
 305 310

<210> 17
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(942)
 <223>

<400> 17 48
 atg ggt gta aaa aac cat tcc aca gtg act gag ttt ctt ctt tca gga
 Met Gly Val Lys Asn His Ser Thr Val Thr Glu Phe Leu Leu Ser Gly
 1 5 10 15
 tta act gaa caa gca gag ctt cag ctg ccc ctc ttc tgc ctc ttc tta 96
 Leu Thr Glu Gln Ala Glu Leu Gln Leu Pro Leu Phe Cys Leu Phe Leu
 20 25 30
 gga att tac aca gtt act gtg gtg gga aac ctc agc atg atc tca att 144
 Gly Ile Tyr Thr Val Thr Val Val Gly Asn Leu Ser Met Ile Ser Ile
 35 40 45
 att agg ctg aat cgt caa ctt cat acc ccc atg tac tat ttc ctg agt 192
 Ile Arg Leu Asn Arg Gln Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
 50 55 60
 agt ttg tct ttt tta gat ttc tgc tat tct tct gtc att acc cct aaa 240
 Ser Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Val Ile Thr Pro Lys
 65 70 75 80
 atg cta tca ggg ttt tta tgc aga gat aga tcc atc tcc tat tct gga 288
 Met Leu Ser Gly Phe Leu Cys Arg Asp Arg Ser Ile Ser Tyr Ser Gly
 85 90 95
 tgc atg att cag ctg ttt ttt ttc tgt gtt tgt gtt att tct gaa tgc 336

Cys Met Ile Gln Leu Phe Phe Phe Cys Val Cys Val Ile Ser Glu Cys	
100 105 110	
tac atg ctg gca gcc atg gcc tgc gat cgc tac gtg gcc atc tgc agc	384
Tyr Met Leu Ala Ala Met Ala Cys Asp Arg Tyr Val Ala Ile Cys Ser	
115 120 125	
cca ctg ctc tac agg gtc atc atg tcc cct agg gtc tgt tct ctg ctg	432
Pro Leu Leu Tyr Arg Val Ile Met Ser Pro Arg Val Cys Ser Leu Leu	
130 135 140	
gtg gct gct gtc ttc tca gta ggt ttc act gat gct gtg atc cat gga	480
Val Ala Ala Val Phe Ser Val Gly Phe Thr Asp Ala Val Ile His Gly	
145 150 155 160	
ggg tgt ata ctc agg ttg tct ttc tgt gga tca aac atc att aaa cat	528
Gly Cys Ile Leu Arg Leu Ser Phe Cys Gly Ser Asn Ile Ile Lys His	
165 170 175	
tat ttc tgt gac att gtc cct ctt att aaa ctc tcc tgc tcc agc act	576
Tyr Phe Cys Asp Ile Val Pro Leu Ile Lys Leu Ser Cys Ser Ser Thr	
180 185 190	
tat att gat gag ctt ttg att ttt gtc att ggt gga ttt aac atg gtg	624
Tyr Ile Asp Glu Leu Leu Ile Phe Val Ile Gly Gly Phe Asn Met Val	
195 200 205	
gcc aca agc cta aca atc att att tca tat gct ttt atc ctc acc agc	672
Ala Thr Ser Leu Thr Ile Ile Ile Ser Tyr Ala Phe Ile Leu Thr Ser	
210 215 220	
atc ctg cgc atc cac tct aaa aag ggc agg tgc aaa gcg ttt agc acc	720
Ile Leu Arg Ile His Ser Lys Lys Gly Arg Cys Lys Ala Phe Ser Thr	
225 230 235 240	
tgt agc tcc cac ctg aca gct gtt ctt atg ttt tat ggg tct ctg atg	768
Cys Ser Ser His Leu Thr Ala Val Leu Met Phe Tyr Gly Ser Leu Met	
245 250 255	
tcc atg tat ctc aaa cct gct tct agc agt tca ctc acc cag gag aaa	816
Ser Met Tyr Leu Lys Pro Ala Ser Ser Ser Ser Leu Thr Gln Glu Lys	
260 265 270	
gta tcc tca gta ttt tat acc act gtg att ctc atg ttg aat ccc ttg	864
Val Ser Ser Val Phe Tyr Thr Thr Val Ile Leu Met Leu Asn Pro Leu	
275 280 285	
ata tat agt ctg agg aac aat gaa gta aga aat gct ctg atg aaa ctt	912
Ile Tyr Ser Leu Arg Asn Asn Glu Val Arg Asn Ala Leu Met Lys Leu	
290 295 300	
tta aga aga aaa ata tct tta tct cca gga taa	945
Leu Arg Arg Lys Ile Ser Leu Ser Pro Gly	
305 310	

<210> 18
 <211> 314
 <212> PRT
 <213> Homo Sapiens

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<400> 18

Met Gly Val Lys Asn His Ser Thr Val Thr Glu Phe Leu Leu Ser Gly
 1 5 10 15

Leu Thr Glu Gln Ala Glu Leu Gln Leu Pro Leu Phe Cys Leu Phe Leu
 20 25 30

Gly Ile Tyr Thr Val Thr Val Val Gly Asn Leu Ser Met Ile Ser Ile
 35 40 45

Ile Arg Leu Asn Arg Gln Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
 50 55 60

Ser Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Val Ile Thr Pro Lys
 65 70 75 80

Met Leu Ser Gly Phe Leu Cys Arg Asp Arg Ser Ile Ser Tyr Ser Gly
 85 90 95

Cys Met Ile Gln Leu Phe Phe Phe Cys Val Cys Val Ile Ser Glu Cys
 100 105 110

Tyr Met Leu Ala Ala Met Ala Cys Asp Arg Tyr Val Ala Ile Cys Ser
 115 120 125

Pro Leu Leu Tyr Arg Val Ile Met Ser Pro Arg Val Cys Ser Leu Leu
 130 135 140

Val Ala Ala Val Phe Ser Val Gly Phe Thr Asp Ala Val Ile His Gly
 145 150 155 160

Gly Cys Ile Leu Arg Leu Ser Phe Cys Gly Ser Asn Ile Ile Lys His
 165 170 175

Tyr Phe Cys Asp Ile Val Pro Leu Ile Lys Leu Ser Cys Ser Ser Thr
 180 185 190

Tyr Ile Asp Glu Leu Leu Ile Phe Val Ile Gly Gly Phe Asn Met Val
 195 200 205

Ala Thr Ser Leu Thr Ile Ile Ile Ser Tyr Ala Phe Ile Leu Thr Ser
 210 215 220

Ile Leu Arg Ile His Ser Lys Lys Gly Arg Cys Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ser Ser His Leu Thr Ala Val Leu Met Phe Tyr Gly Ser Leu Met
245 250 255

Ser Met Tyr Leu Lys Pro Ala Ser Ser Ser Ser Leu Thr Gln Glu Lys
260 265 270

Val Ser Ser Val Phe Tyr Thr Thr Val Ile Leu Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Asn Glu Val Arg Asn Ala Leu Met Lys Leu
290 295 300

Leu Arg Arg Lys Ile Ser Leu Ser Pro Gly
305 310

<210> 19
<211> 936
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1) .. (933)
<223>

<400> 19
atg tcc aac gcc acc cta ctg aca gcg ttc atc ctc acg ggc ctt ccc 48
Met Ser Asn Ala Thr Leu Leu Thr Ala Phe Ile Leu Thr Gly Leu Pro
1 5 10 15
cat gcc cca ggg ctg gac gcc ccc ctc ttt gga atc ttc ctg gtg gtt 96
His Ala Pro Gly Leu Asp Ala Pro Leu Phe Gly Ile Phe Leu Val Val
20 25 30
tac gtg ctc act gtg ctg ggg aac ctc ctc atc ctg ctg gtg atc agg 144
Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
35 40 45
gtg gat tct cac ctc cac acc ccc atg tac tac ttc ctc acc aac ctg 192
Val Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Thr Asn Leu
50 55 60
tcc ttc att gac atg tgg ttc tcc act gtc acg gtg ccc aaa atg ctg 240
Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Met Leu
65 70 75 80
atg acc ttg gtg tcc cca agc ggc agg act atc tcc ttc cac agc tgc 288
Met Thr Leu Val Ser Pro Ser Gly Arg Thr Ile Ser Phe His Ser Cys
85 90 95
gtg gct cag ctc tat ttt ttc cac ttc ctg ggg agc acc gag tgt ttc 336
Val Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Ser Thr Glu Cys Phe
100 105 110

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ctc tac aca gtc atg tcc tat gat cgc tac ctg gcc atc agt tac ccg 384
 Leu Tyr Thr Val Met Ser Tyr Asp Arg Tyr Leu Ala Ile Ser Tyr Pro
 115 120 125
 ctc agg tac acc aac atg atg act ggg cgc tcg tgt gcc ctc ctg gcc 432
 Leu Arg Tyr Thr Asn Met Met Thr Gly Arg Ser Cys Ala Leu Leu Ala
 130 135 140
 acc ggc act tgg ctc agt ggc tct ctg cac tct gct gtc cag acc ata 480
 Thr Gly Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Thr Ile
 145 150 155 160
 ttg act ttc cat ttg ccc tac tgt gga ccc aac cag atc cag cac tac 528
 Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Gln Ile Gln His Tyr
 165 170 175
 ttc tgt gac gca ccg ccc atc ctg aaa ctg gcc tgt gca gac acc tca 576
 Phe Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser
 180 185 190
 gcc aac gag atg gtc atc ttt gtg aat att ggg cta gtg gcc tcg ggc 624
 Ala Asn Glu Met Val Ile Phe Val Asn Ile Gly Leu Val Ala Ser Gly
 195 200 205
 tgc ttt gtc ctg ata gtg ctg tcc tat gtg tcc atc gtc tgt tcc atc 672
 Cys Phe Val Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile
 210 215 220
 ctg cgg atc cgc acc tca gag ggg agg cac aga gcc ttt cag acc tgt 720
 Leu Arg Ile Arg Thr Ser Glu Gly Arg His Arg Ala Phe Gln Thr Cys
 225 230 235 240
 gcc tcc cac tgt atc gtg gtc ctt tgc ttc ttt ggc cct ggt ctt ttc 768
 Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Gly Pro Gly Leu Phe
 245 250 255
 att tac ctg agg cca ggc tcc agg gac gcc ttg cat ggg gtt gtg gcc 816
 Ile Tyr Leu Arg Pro Gly Ser Arg Asp Ala Leu His Gly Val Val Ala
 260 265 270
 gtt ttc tac acc acg ctg act cct ctt ttc aac cct gtt gtg tac acc 864
 Val Phe Tyr Thr Thr Leu Thr Pro Leu Phe Asn Pro Val Val Tyr Thr
 275 280 285
 ctg aga aac aag gag gta aag aaa gct ctg ttg aag ctg aaa aat ggg 912
 Leu Arg Asn Lys Glu Val Lys Lys Ala Leu Leu Lys Leu Lys Asn Gly
 290 295 300
 tca gta ttt gct cag ggt gaa tag 936
 Ser Val Phe Ala Gln Gly Glu
 305 310

<210> 20
 <211> 311
 <212> PRT
 <213> Homo Sapiens

<400> 20

Met Ser Asn Ala Thr Leu Leu Thr Ala Phe Ile Leu Thr Gly Leu Pro

1	5	10	15
His Ala Pro Gly Leu Asp Ala Pro Leu Phe Gly Ile Phe Leu Val Val	20	25	30
Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg	35	40	45
Val Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Thr Asn Leu	50	55	60
Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Met Leu	65	70	75
Met Thr Leu Val Ser Pro Ser Gly Arg Thr Ile Ser Phe His Ser Cys	85	90	95
Val Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Ser Thr Glu Cys Phe	100	105	110
Leu Tyr Thr Val Met Ser Tyr Asp Arg Tyr Leu Ala Ile Ser Tyr Pro	115	120	125
Leu Arg Tyr Thr Asn Met Met Thr Gly Arg Ser Cys Ala Leu Leu Ala	130	135	140
Thr Gly Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Thr Ile	145	150	155
Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Gln Ile Gln His Tyr	165	170	175
Phe Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser	180	185	190
Ala Asn Glu Met Val Ile Phe Val Asn Ile Gly Leu Val Ala Ser Gly	195	200	205
Cys Phe Val Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile	210	215	220
Leu Arg Ile Arg Thr Ser Glu Gly Arg His Arg Ala Phe Gln Thr Cys	225	230	235
Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Gly Pro Gly Leu Phe	245	250	255

Ile Tyr Leu Arg Pro Gly Ser Arg Asp Ala Leu His Gly Val Val Ala
 260 265 270

Val Phe Tyr Thr Thr Leu Thr Pro Leu Phe Asn Pro Val Val Tyr Thr
 275 280 285

Leu Arg Asn Lys Glu Val Lys Lys Ala Leu Leu Lys Leu Lys Asn Gly
 290 295 300

Ser Val Phe Ala Gln Gly Glu
 305 310

<210> 21
 <211> 972
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(969)
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<400> 21
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 Met Asn Pro Glu Asn Trp Thr Gln Val Thr Ser Phe Val Leu Leu Gly
 1 5 10 15
 ttc ccc agt agc cac ctc ata cag ttc ctg gtg ttc ctg ggg tta atg 96
 Phe Pro Ser Ser His Leu Ile Gln Phe Leu Val Phe Leu Gly Leu Met
 20 25 30
 gtg acc tac att gta aca gcc aca ggc aag ctg cta att att gtg ctc 144
 Val Thr Tyr Ile Val Thr Ala Thr Gly Lys Leu Leu Ile Ile Val Leu
 35 40 45
 agc tgg ata gac caa cgc ctg cac ata cag atg tac ttc ttc ctg cgg 192
 Ser Trp Ile Asp Gln Arg Leu His Ile Gln Met Tyr Phe Phe Leu Arg
 50 55 60
 aat ttc tcc ttc ctg gag ctg ttg ctg gta act gtt gtg gtt ccc aag 240
 Asn Phe Ser Phe Leu Glu Leu Leu Leu Val Thr Val Val Val Pro Lys
 65 70 75 80
 atg ctt gtc gtc atc ctc acg ggg gat cac acc atc tca ttt gtc agc 288
 Met Leu Val Val Ile Leu Thr Gly Asp His Thr Ile Ser Phe Val Ser
 85 90 95
 tgc atc atc cag tcc tac ctc tac ttc ttt cta ggc acc act gac ttc 336
 Cys Ile Ile Gln Ser Tyr Leu Tyr Phe Phe Leu Gly Thr Thr Asp Phe
 100 105 110
 ttc ctc ttg gcc gtc atg tct ctg gat cgt tac ctg gca atc tgc cga 384
 Phe Leu Leu Ala Val Met Ser Leu Asp Arg Tyr Leu Ala Ile Cys Arg
 115 120 125

cca ctc cgc tat gag acc ctg atg aat ggc cat gtc tgt tcc caa cta 432
 Pro Leu Arg Tyr Glu Thr Leu Met Asn Gly His Val Cys Ser Gln Leu
 130 135 140

gtg ctg gcc tcc tgg cta gct gga ttc ctc tgg gtc ctt tgc ccc act 480
 Val Leu Ala Ser Trp Leu Ala Gly Phe Leu Trp Val Leu Cys Pro Thr
 145 150 155 160

gtc ctc atg gcc agc ctg cct ttc tgt ggc ccc aat ggt att gac cac 528
 Val Leu Met Ala Ser Leu Pro Phe Cys Gly Pro Asn Gly Ile Asp His
 165 170 175

ttc ttt cgt gac agt tgg ccc ttg ctc agg ctt tct tgt ggg gac acc 576
 Phe Phe Arg Asp Ser Trp Pro Leu Leu Arg Leu Ser Cys Gly Asp Thr
 180 185 190

cac ctg ctg aaa ctg gtg gct ttc atg ctc tct acg ttg gtg tta ctg 624
 His Leu Leu Lys Leu Val Ala Phe Met Leu Ser Thr Leu Val Leu Leu
 195 200 205

ggc tca ctg gct ctg acc tca gtt tcc tat gcc tgc att ctt gcc act 672
 Gly Ser Leu Ala Leu Thr Ser Val Ser Tyr Ala Cys Ile Leu Ala Thr
 210 215 220

ggt ctc agg gcc cct aca gct gct gag cga agg aaa gcg ttt tcc act 720
 Val Leu Arg Ala Pro Thr Ala Ala Glu Arg Arg Lys Ala Phe Ser Thr
 225 230 235 240

tgc gcc tcg cat ctt aca gtg gtg gtc atc atc tat ggc agt tcc atc 768
 Cys Ala Ser His Leu Thr Val Val Val Ile Ile Tyr Gly Ser Ser Ile
 245 250 255

ttt ctc tac att cgt atg tca gag gct cag tcc aaa ctg ctc aac aaa 816
 Phe Leu Tyr Ile Arg Met Ser Glu Ala Gln Ser Lys Leu Leu Asn Lys
 260 265 270

ggt gcc tcc gtc ctg agc tgc atc atc aca ccc ctc ttg aac cca ttc 864
 Gly Ala Ser Val Leu Ser Cys Ile Ile Thr Pro Leu Leu Asn Pro Phe
 275 280 285

atc ttc act ctc cgc aat gac aag gtg cag caa gca ctg aga gaa gcc 912
 Ile Phe Thr Leu Arg Asn Asp Lys Val Gln Gln Ala Leu Arg Glu Ala
 290 295 300

ttg ggg tgg ccc agg ctc act gct gtg atg aaa ctg agg gtc aca agt 960
 Leu Gly Trp Pro Arg Leu Thr Ala Val Met Lys Leu Arg Val Thr Ser
 305 310 315 320

caa agg aaa tga 972
 Gln Arg Lys

<210> 22
 <211> 323
 <212> PRT
 <213> Homo Sapiens
 <400> 22

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Met Asn Pro Glu Asn Trp Thr Gln Val Thr Ser Phe Val Leu Leu Gly
 1 5 10 15

Phe Pro Ser Ser His Leu Ile Gln Phe Leu Val Phe Leu Gly Leu Met
 20 25 30

Val Thr Tyr Ile Val Thr Ala Thr Gly Lys Leu Leu Ile Ile Val Leu
 35 40 45

Ser Trp Ile Asp Gln Arg Leu His Ile Gln Met Tyr Phe Phe Leu Arg
 50 55 60

Asn Phe Ser Phe Leu Glu Leu Leu Leu Val Thr Val Val Val Pro Lys
 65 70 75 80

Met Leu Val Val Ile Leu Thr Gly Asp His Thr Ile Ser Phe Val Ser
 85 90 95

Cys Ile Ile Gln Ser Tyr Leu Tyr Phe Phe Leu Gly Thr Thr Asp Phe
 100 105 110

Phe Leu Leu Ala Val Met Ser Leu Asp Arg Tyr Leu Ala Ile Cys Arg
 115 120 125

Pro Leu Arg Tyr Glu Thr Leu Met Asn Gly His Val Cys Ser Gln Leu
 130 135 140

Val Leu Ala Ser Trp Leu Ala Gly Phe Leu Trp Val Leu Cys Pro Thr
 145 150 155 160

Val Leu Met Ala Ser Leu Pro Phe Cys Gly Pro Asn Gly Ile Asp His
 165 170 175

Phe Phe Arg Asp Ser Trp Pro Leu Leu Arg Leu Ser Cys Gly Asp Thr
 180 185 190

His Leu Leu Lys Leu Val Ala Phe Met Leu Ser Thr Leu Val Leu Leu
 195 200 205

Gly Ser Leu Ala Leu Thr Ser Val Ser Tyr Ala Cys Ile Leu Ala Thr
 210 215 220

Val Leu Arg Ala Pro Thr Ala Ala Glu Arg Arg Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Leu Thr Val Val Val Ile Ile Tyr Gly Ser Ser Ile

<400>	23															
atg	aat	cca	gca	aat	cat	tcc	cag	gtg	gca	gga	ttt	gtt	cta	ctg	ggg	48
Met	Asn	Pro	Ala	Asn	His	Ser	Gln	Val	Ala	Gly	Phe	Val	Leu	Leu	Gly	
1				5					10					15		
ctc	tct	cag	gtt	tgg	gag	ctt	cgg	ttt	gtt	ttc	ttc	act	gtt	ttc	tct	96
Leu	Ser	Gln	Val	Trp	Glu	Leu	Arg	Phe	Val	Phe	Phe	Thr	Val	Phe	Ser	
			20				25						30			
gct	gtg	tat	ttt	atg	act	gta	gtg	gga	aac	ctt	ctt	att	gtg	gtc	ata	144
Ala	Val	Tyr	Phe	Met	Thr	Val	Val	Gly	Asn	Leu	Leu	Ile	Val	Val	Ile	
		35					40					45				
gtg	acc	tcc	gac	cca	cac	ctg	cac	aca	acc	atg	tat	ttt	ctc	ttg	ggc	192
Val	Thr	Ser	Asp	Pro	His	Leu	His	Thr	Thr	Met	Tyr	Phe	Leu	Leu	Gly	
	50					55					60					
aat	ctt	tct	ttc	ctg	gac	ttt	tgc	tac	tct	tcc	atc	aca	gca	cct	agg	240
Asn	Leu	Ser	Phe	Leu	Asp	Phe	Cys	Tyr	Ser	Ser	Ile	Thr	Ala	Pro	Arg	
65					70					75					80	
atg	ctg	gtt	gac	ttg	ctc	tca	ggc	aac	cct	acc	att	tcc	ttt	ggg	gga	288
Met	Leu	Val	Asp	Leu	Leu	Ser	Gly	Asn	Pro	Thr	Ile	Ser	Phe	Gly	Gly	
				85					90					95		
tgc	ctg	act	caa	ctc	ttc	ttc	ttc	cac	ttc	att	gga	ggc	atc	aag	atc	336
Cys	Leu	Thr	Gln	Leu	Phe	Phe	Phe	His	Phe	Ile	Gly	Gly	Ile	Lys	Ile	

100	105	110	
ttc ctg ctg act gtc atg gcg tat gac cgc tac att gcc att tcc cag			384
Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Ile Ala Ile Ser Gln			
115	120	125	
ccc ctg cac tac acg ctc att atg aat cag act gtc tgt gca ctc ctt			432
Pro Leu His Tyr Thr Leu Ile Met Asn Gln Thr Val Cys Ala Leu Leu			
130	135	140	
atg gca gcc tcc tgg gtg ggg ggc ttc atc cac tcc ata gta cag att			480
Met Ala Ala Ser Trp Val Gly Gly Phe Ile His Ser Ile Val Gln Ile			
145	150	155	160
gca ttg act atc cag ctg cca ttc tgt ggg cct gac aag ctg gac aac			528
Ala Leu Thr Ile Gln Leu Pro Phe Cys Gly Pro Asp Lys Leu Asp Asn			
165	170	175	
ttt tat tgt gat gtg cct cag ctg atc aaa ttg gcc tgc aca gat acc			576
Phe Tyr Cys Asp Val Pro Gln Leu Ile Lys Leu Ala Cys Thr Asp Thr			
180	185	190	
ttt gtc tta gag ctt tta atg gtg tct aac aat ggc ctg gtg acc ctg			624
Phe Val Leu Glu Leu Leu Met Val Ser Asn Asn Gly Leu Val Thr Leu			
195	200	205	
atg tgt ttt ctg gtg ctt ctg gga tgc tac aca gca ctg cta gtc atg			672
Met Cys Phe Leu Val Leu Leu Gly Ser Tyr Thr Ala Leu Leu Val Met			
210	215	220	
ctc cga agc cac tca cgg gag ggc cgc agc aag gcc ctg tct acc tgt			720
Leu Arg Ser His Ser Arg Glu Gly Arg Ser Lys Ala Leu Ser Thr Cys			
225	230	235	240
gcc tct cac att gct gtg gtg acc tta atc ttt gtg cct tgc atc tac			768
Ala Ser His Ile Ala Val Val Thr Leu Ile Phe Val Pro Cys Ile Tyr			
245	250	255	
gtc tat aca agg cct ttt cgg aca ttc ccc atg gac aag gcc gtc tct			816
Val Tyr Thr Arg Pro Phe Arg Thr Phe Pro Met Asp Lys Ala Val Ser			
260	265	270	
gtg cta tac aca att gtc acc ccc atg ctg aat cct gcc atc tat acc			864
Val Leu Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Ala Ile Tyr Thr			
275	280	285	
ctg aga aac aag gaa gtg atc atg gcc atg aag aag ctg tgg agg agg			912
Leu Arg Asn Lys Glu Val Ile Met Ala Met Lys Lys Leu Trp Arg Arg			
290	295	300	
aaa aag gac cct att ggt ccc ctg gag cac aga ccc tta cat tag			957
Lys Lys Asp Pro Ile Gly Pro Leu Glu His Arg Pro Leu His			
305	310	315	

<210> 24
 <211> 318
 <212> PRT
 <213> Homo Sapiens
 <400> 24

Met Asn Pro Ala Asn His Ser Gln Val Ala Gly Phe Val Leu Leu Gly
 1 5 10 15
 Leu Ser Gln Val Trp Glu Leu Arg Phe Val Phe Phe Thr Val Phe Ser
 20 25 30
 Ala Val Tyr Phe Met Thr Val Val Gly Asn Leu Leu Ile Val Val Ile
 35 40 45
 Val Thr Ser Asp Pro His Leu His Thr Thr Met Tyr Phe Leu Leu Gly
 50 55 60
 Asn Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Ile Thr Ala Pro Arg
 65 70 75 80
 Met Leu Val Asp Leu Leu Ser Gly Asn Pro Thr Ile Ser Phe Gly Gly
 85 90 95
 Cys Leu Thr Gln Leu Phe Phe Phe His Phe Ile Gly Gly Ile Lys Ile
 100 105 110
 Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Ile Ala Ile Ser Gln
 115 120 125
 Pro Leu His Tyr Thr Leu Ile Met Asn Gln Thr Val Cys Ala Leu Leu
 130 135 140
 Met Ala Ala Ser Trp Val Gly Gly Phe Ile His Ser Ile Val Gln Ile
 145 150 155 160
 Ala Leu Thr Ile Gln Leu Pro Phe Cys Gly Pro Asp Lys Leu Asp Asn
 165 170 175
 Phe Tyr Cys Asp Val Pro Gln Leu Ile Lys Leu Ala Cys Thr Asp Thr
 180 185 190
 Phe Val Leu Glu Leu Leu Met Val Ser Asn Asn Gly Leu Val Thr Leu
 195 200 205
 Met Cys Phe Leu Val Leu Leu Gly Ser Tyr Thr Ala Leu Leu Val Met
 210 215 220
 Leu Arg Ser His Ser Arg Glu Gly Arg Ser Lys Ala Leu Ser Thr Cys
 225 230 235 240

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Ala Ser His Ile Ala Val Val Thr Leu Ile Phe Val Pro Cys Ile Tyr
 245 250 255

Val Tyr Thr Arg Pro Phe Arg Thr Phe Pro Met Asp Lys Ala Val Ser
 260 265 270

Val Leu Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Ala Ile Tyr Thr
 275 280 285

Leu Arg Asn Lys Glu Val Ile Met Ala Met Lys Lys Leu Trp Arg Arg
 290 295 300

Lys Lys Asp Pro Ile Gly Pro Leu Glu His Arg Pro Leu His
 305 310 315

<210> 25
 <211> 999
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(996)
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 Met Leu Glu Gly Val Glu His Leu Leu Leu Leu Leu Thr Asp
 1 5 10 15
 gtg aac agc aag gaa ctg caa agt gga aac cag act tct gtg tct cac 96
 Val Asn Ser Lys Glu Leu Gln Ser Gly Asn Gln Thr Ser Val Ser His
 20 25 30
 ttc att ttg gtg ggc ctg cac cac cca cca cag ctg gga gcg cca ctc 144
 Phe Ile Leu Val Gly Leu His His Pro Pro Gln Leu Gly Ala Pro Leu
 35 40 45
 ttc tta gct ttc ctt gtc atc tat ctc ctc act gtt tct gga aat ggg 192
 Phe Leu Ala Phe Leu Val Ile Tyr Leu Leu Thr Val Ser Gly Asn Gly
 50 55 60
 ctc atc atc ctc act gtc tta gtg gac atc cgg ctc cat cgt ccc atg 240
 Leu Ile Ile Leu Thr Val Leu Val Asp Ile Arg Leu His Arg Pro Met
 65 70 75 80
 tgc ttg ttc ctg tgt cac ctc tcc ttc ttg gac atg acc att tct tgt 288
 Cys Leu Phe Leu Cys His Leu Ser Phe Leu Asp Met Thr Ile Ser Cys
 85 90 95
 gct att gtc ccc aag atg ctg gct ggc ttt ctc ttg ggt agt agg att 336
 Ala Ile Val Pro Lys Met Leu Ala Gly Phe Leu Leu Gly Ser Arg Ile
 100 105 110
 atc tcc ttt ggg ggc tgt gta atc caa cta ttt tct ttc cat ttc ctg 384

Ile Ser Phe Gly Gly Cys Val	Ile Gln Leu Phe Ser Phe His Phe Leu	
115	120	125
ggc tgt act gag tgc ttc ctt tac aca ctc atg gct tat gac cgt ttc		432
Gly Cys Thr Glu Cys Phe Leu Tyr Thr Leu Met Ala Tyr Asp Arg Phe		
130	135	140
ctt gcc att tgt aag ccc tta cac tat gct acc atc atg acc cac aga		480
Leu Ala Ile Cys Lys Pro Leu His Tyr Ala Thr Ile Met Thr His Arg		
145	150	155
gtc tgt aac tcc ctg gct tta ggc acc tgg ctg gga ggg act atc cat		528
Val Cys Asn Ser Leu Ala Leu Gly Thr Trp Leu Gly Gly Thr Ile His		
165	170	175
tca ctt ttc caa aca agt ttt gta ttc cgg ctg ccc ttc tgt ggc ccc		576
Ser Leu Phe Gln Thr Ser Phe Val Phe Arg Leu Pro Phe Cys Gly Pro		
180	185	190
aat cgg gtc gac tac atc ttc tgt gac att cct gcc atg ctg cgt cta		624
Asn Arg Val Asp Tyr Ile Phe Cys Asp Ile Pro Ala Met Leu Arg Leu		
195	200	205
gcc tgc gcc gat acg gcc atc aac gag ctg gtc acc ttt gca gac att		672
Ala Cys Ala Asp Thr Ala Ile Asn Glu Leu Val Thr Phe Ala Asp Ile		
210	215	220
ggc ttc ctg gcc ctc acc tgc ttc atg ctc atc ctc act tcc tat ggc		720
Gly Phe Leu Ala Leu Thr Cys Phe Met Leu Ile Leu Thr Ser Tyr Gly		
225	230	235
tat att gta gct gcc atc ctg cga att ccg tca gca gat ggg cgc cgc		768
Tyr Ile Val Ala Ala Ile Leu Arg Ile Pro Ser Ala Asp Gly Arg Arg		
245	250	255
aat gcc ttc tcc act tgt gct gcc cac ctc act gtt gtc att gtt tac		816
Asn Ala Phe Ser Thr Cys Ala Ala His Leu Thr Val Val Ile Val Tyr		
260	265	270
tat gtg ccc tgc acc ttc att tac ctg cgg cct tgt tca cag gag ccc		864
Tyr Val Pro Cys Thr Phe Ile Tyr Leu Arg Pro Cys Ser Gln Glu Pro		
275	280	285
ctg gat ggg gtg gta gct gtc ttt tac act gtc atc act ccc ttg ctt		912
Leu Asp Gly Val Val Ala Val Phe Tyr Thr Val Ile Thr Pro Leu Leu		
290	295	300
aac tcc atc atc tac aca ctg tgc aac aaa gaa atg aag gca gca tta		960
Asn Ser Ile Ile Tyr Thr Leu Cys Asn Lys Glu Met Lys Ala Ala Leu		
305	310	315
cag agg cta ggg ggc cac aag gaa gtg cag cct cac tga		999
Gln Arg Leu Gly Gly His Lys Glu Val Gln Pro His		
325	330	

<210> 26

<211> 332

<212> PRT

<213> Homo Sapiens

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<400> 26

Met Leu Glu Gly Val Glu His Leu Leu Leu Leu Leu Leu Thr Asp
 1 5 10 15

Val Asn Ser Lys Glu Leu Gln Ser Gly Asn Gln Thr Ser Val Ser His
 20 25 30

Phe Ile Leu Val Gly Leu His His Pro Pro Gln Leu Gly Ala Pro Leu
 35 40 45

Phe Leu Ala Phe Leu Val Ile Tyr Leu Leu Thr Val Ser Gly Asn Gly
 50 55 60

Leu Ile Ile Leu Thr Val Leu Val Asp Ile Arg Leu His Arg Pro Met
 65 70 75 80

Cys Leu Phe Leu Cys His Leu Ser Phe Leu Asp Met Thr Ile Ser Cys
 85 90 95

Ala Ile Val Pro Lys Met Leu Ala Gly Phe Leu Leu Gly Ser Arg Ile
 100 105 110

Ile Ser Phe Gly Gly Cys Val Ile Gln Leu Phe Ser Phe His Phe Leu
 115 120 125

Gly Cys Thr Glu Cys Phe Leu Tyr Thr Leu Met Ala Tyr Asp Arg Phe
 130 135 140

Leu Ala Ile Cys Lys Pro Leu His Tyr Ala Thr Ile Met Thr His Arg
 145 150 155 160

Val Cys Asn Ser Leu Ala Leu Gly Thr Trp Leu Gly Gly Thr Ile His
 165 170 175

Ser Leu Phe Gln Thr Ser Phe Val Phe Arg Leu Pro Phe Cys Gly Pro
 180 185 190

Asn Arg Val Asp Tyr Ile Phe Cys Asp Ile Pro Ala Met Leu Arg Leu
 195 200 205

Ala Cys Ala Asp Thr Ala Ile Asn Glu Leu Val Thr Phe Ala Asp Ile
 210 215 220

Gly Phe Leu Ala Leu Thr Cys Phe Met Leu Ile Leu Thr Ser Tyr Gly
 225 230 235 240

Tyr Ile Val Ala Ala Ile Leu Arg Ile Pro Ser Ala Asp Gly Arg Arg
245 250 255

Asn Ala Phe Ser Thr Cys Ala Ala His Leu Thr Val Val Ile Val Tyr
260 265 270

Tyr Val Pro Cys Thr Phe Ile Tyr Leu Arg Pro Cys Ser Gln Glu Pro
275 280 285

Leu Asp Gly Val Val Ala Val Phe Tyr Thr Val Ile Thr Pro Leu Leu
290 295 300

Asn Ser Ile Ile Tyr Thr Leu Cys Asn Lys Glu Met Lys Ala Ala Leu
305 310 315 320

Gln Arg Leu Gly Gly His Lys Glu Val Gln Pro His
325 330

<210> 27
<211> 960
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1) .. (957)
<223>

<400> 27
atg cct gtg ggg aaa ctt gtc ttc aac cag tct gag ccc act gag ttt 48
Met Pro Val Gly Lys Leu Val Phe Asn Gln Ser Glu Pro Thr Glu Phe
1 5 10 15
gtg ttc cgt gcg ttc acc aca gcc act gaa ttc cag gtt ctt ctc ttc 96
Val Phe Arg Ala Phe Thr Thr Ala Thr Glu Phe Gln Val Leu Leu Phe
20 25 30
ctt ctc ttc ctc ctc ctc tac ttg atg atc ctc tgt ggc aac aca gcc 144
Leu Leu Phe Leu Leu Leu Tyr Leu Met Ile Leu Cys Gly Asn Thr Ala
35 40 45
atc atc tgg gtg gtg tgc aca cac agc acc ctc cgc acc ccg atg tat 192
Ile Ile Trp Val Val Cys Thr His Ser Thr Leu Arg Thr Pro Met Tyr
50 55 60
ttc ttc ctg tcc aac ctg tct ttc ctg gaa ctc tgc tac acc acc gtg 240
Phe Phe Leu Ser Asn Leu Ser Phe Leu Glu Leu Cys Tyr Thr Thr Val
65 70 75 80
gta gta ccc ttg atg ctt tcc aac att ttg ggg gcc cag aag ccc att 288
Val Val Pro Leu Met Leu Ser Asn Ile Leu Gly Ala Gln Lys Pro Ile
85 90 95

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tcg ttg gct gga tgt ggg gcc caa atg ttc ttc ttt gtc acc ctc ggc 336
 Ser Leu Ala Gly Cys Gly Ala Gln Met Phe Phe Phe Val Thr Leu Gly 110
 100 105

agc acg gac tgt ttc ctc ttg gcg atc atg gcc tat gac cgc tat gtg 384
 Ser Thr Asp Cys Phe Leu Leu Ala Ile Met Ala Tyr Asp Arg Tyr Val 125
 115 120

gct atc tgc cac ccg ctg cac tac acc ctc atc atg acc cgc gag ctg 432
 Ala Ile Cys His Pro Leu His Tyr Thr Leu Ile Met Thr Arg Glu Leu 140
 130 135

tgc acg cag atg ctg ggt ggg gcc ctg ggc ctg gcc ctc ttc ccc tcc 480
 Cys Thr Gln Met Leu Gly Gly Ala Leu Gly Leu Ala Leu Phe Pro Ser 160
 145 150 155

ctg cag ctc acc gcc tta atc ttc acc ctg ccc ttt tgc ggc cac cac 528
 Leu Gln Leu Thr Ala Leu Ile Phe Thr Leu Pro Phe Cys Gly His His 175
 165 170

cag gaa atc aac cac ttc ctc tgc gat gtg cct ccc gtc ctg cgc ctg 576
 Gln Glu Ile Asn His Phe Leu Cys Asp Val Pro Pro Val Leu Arg Leu 190
 180 185

gcc tgc gct gac atc cgc gtg cac cag gct gtc ctc tat gtc gtg agc 624
 Ala Cys Ala Asp Ile Arg Val His Gln Ala Val Leu Tyr Val Val Ser 205
 195 200

atc ctc gtg ctg acc atc ccc ttc ctg ctc atc tgc gtc tcc tac gtg 672
 Ile Leu Val Leu Thr Ile Pro Phe Leu Leu Ile Cys Val Ser Tyr Val 220
 210 215

ttc atc acc tgt gcc atc ctg agc atc cgt tct gcc gag ggc cgc cgc 720
 Phe Ile Thr Cys Ala Ile Leu Ser Ile Arg Ser Ala Glu Gly Arg Arg 240
 225 230 235

cgg gcc ttc tcc acc tgc tcc ttc cac ctc acc gtg gtc ctg ctg cag 768
 Arg Ala Phe Ser Thr Cys Ser Phe His Leu Thr Val Val Leu Leu Gln 255
 245 250

tat ggc tgc tgc agc ctc gtg tac ctg cgt cct cgg tcc agc acc tca 816
 Tyr Gly Cys Cys Ser Leu Val Tyr Leu Arg Pro Arg Ser Ser Thr Ser 270
 260 265

gag gat gag gac agc caa atc gcg ttg gtc tac acc ttt gtc acc ccc 864
 Glu Asp Glu Asp Ser Gln Ile Ala Leu Val Tyr Thr Phe Val Thr Pro 285
 275 280

tta ctc aac cct ttg ctt tac agc ctt agg aac aag gat gtc aaa ggt 912
 Leu Leu Asn Pro Leu Leu Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly 300
 290 295

gct ctg agg agt gcc att atc cgt aaa gca gcc tct gac gcc aac tga 960
 Ala Leu Arg Ser Ala Ile Ile Arg Lys Ala Ala Ser Asp Ala Asn 315
 305 310

<210> 28
 <211> 319
 <212> PRT
 <213> Homo Sapiens

<400> 28

Met Pro Val Gly Lys Leu Val Phe Asn Gln Ser Glu Pro Thr Glu Phe
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Val Phe Arg Ala Phe Thr Thr Ala Thr Glu Phe Gln Val Leu Leu Phe
20 25 30

Leu Leu Phe Leu Leu Leu Tyr Leu Met Ile Leu Cys Gly Asn Thr Ala
35 40 45

Ile Ile Trp Val Val Cys Thr His Ser Thr Leu Arg Thr Pro Met Tyr
50 55 60

Phe Phe Leu Ser Asn Leu Ser Phe Leu Glu Leu Cys Tyr Thr Thr Val
65 70 75 80

Val Val Pro Leu Met Leu Ser Asn Ile Leu Gly Ala Gln Lys Pro Ile
85 90 95

Ser Leu Ala Gly Cys Gly Ala Gln Met Phe Phe Phe Val Thr Leu Gly
100 105 110

Ser Thr Asp Cys Phe Leu Leu Ala Ile Met Ala Tyr Asp Arg Tyr Val
115 120 125

Ala Ile Cys His Pro Leu His Tyr Thr Leu Ile Met Thr Arg Glu Leu
130 135 140

Cys Thr Gln Met Leu Gly Gly Ala Leu Gly Leu Ala Leu Phe Pro Ser
145 150 155 160

Leu Gln Leu Thr Ala Leu Ile Phe Thr Leu Pro Phe Cys Gly His His
165 170 175

Gln Glu Ile Asn His Phe Leu Cys Asp Val Pro Pro Val Leu Arg Leu
180 185 190

Ala Cys Ala Asp Ile Arg Val His Gln Ala Val Leu Tyr Val Val Ser
195 200 205

Ile Leu Val Leu Thr Ile Pro Phe Leu Leu Ile Cys Val Ser Tyr Val
210 215 220

Phe Ile Thr Cys Ala Ile Leu Ser Ile Arg Ser Ala Glu Gly Arg Arg
225 230 235 240

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Arg Ala Phe Ser Thr Cys Ser Phe His Leu Thr Val Val Leu Leu Gln
 245 250 255

Tyr Gly Cys Cys Ser Leu Val Tyr Leu Arg Pro Arg Ser Ser Thr Ser
 260 265 270

Glu Asp Glu Asp Ser Gln Ile Ala Leu Val Tyr Thr Phe Val Thr Pro
 275 280 285

Leu Leu Asn Pro Leu Leu Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly
 290 295 300

Ala Leu Arg Ser Ala Ile Ile Arg Lys Ala Ala Ser Asp Ala Asn
 305 310 315

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 Met Lys Thr Leu Cys Ser Phe Leu Gln Ile Ser Arg Asn Met His Gln 15
 1 5 10
 gaa aac caa acc acc atc act gaa ttc att ctc ctg gga ctc tcc aac 96
 Glu Asn Gln Thr Thr Ile Thr Glu Phe Ile Leu Leu Gly Leu Ser Asn 30
 20 25 30
 cag gct gaa cat caa aac ctc ctc ttt gtg ctt ttc ctg agt atg tat 144
 Gln Ala Glu His Gln Asn Leu Leu Phe Val Leu Phe Leu Ser Met Tyr 45
 35 40 45
 gtg gtc act gtg gtt ggg aac ggg ctc atc att gtg gct atc agc ttg 192
 Val Val Thr Val Val Gly Asn Gly Leu Ile Ile Val Ala Ile Ser Leu 60
 50 55 60
 gat ata tac ctt cac acc ccc atg tat ctc ttc ctt gcc tac cta tcc 240
 Asp Ile Tyr Leu His Thr Pro Met Tyr Leu Phe Leu Ala Tyr Leu Ser 80
 65 70 75
 ttt gct gat att tcc tcc att tcc aac tca gtc ccc aaa atg ctg gtg 288
 Phe Ala Asp Ile Ser Ser Ile Ser Asn Ser Val Pro Lys Met Leu Val 95
 85 90 95
 aat att caa acc aac agc caa tcc atc tct tat gag agc tgc atc aca 336
 Asn Ile Gln Thr Asn Ser Gln Ser Ile Ser Tyr Glu Ser Cys Ile Thr 110
 100 105 110

cag atg tac ttt tct att gtg ttt gtc gtc act gac aat ttg ctt ttg 384
 Gln Met Tyr Phe Ser Ile Val Phe Val Val Thr Asp Asn Leu Leu Leu
 115 120 125

ggg acc atg gcc ttc gac cac ttt gtg gcg atc tgc cac cct ctg aac 432
 Gly Thr Met Ala Phe Asp His Phe Val Ala Ile Cys His Pro Leu Asn
 130 135 140

tat aca act ttc atg cgg gcc agg ttc ggc act ttg ctc aca gtc atc 480
 Tyr Thr Thr Phe Met Arg Ala Arg Phe Gly Thr Leu Leu Thr Val Ile
 145 150 155 160

tcg tgg ttc ctc agt aat att att gct ctt aca cac acc ctt ctg ctc 528
 Ser Trp Phe Leu Ser Asn Ile Ile Ala Leu Thr His Thr Leu Leu Leu
 165 170 175

att caa ttg ctc ttc tgt gac cac aac act ctc cca cac ttc ttc tgt 576
 Ile Gln Leu Leu Phe Cys Asp His Asn Thr Leu Pro His Phe Phe Cys
 180 185 190

gac ttg gcc cct ctg ctc aaa ctg tcc tgt tca gat aca atg atc aat 624
 Asp Leu Ala Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr Met Ile Asn
 195 200 205

gag ctt gtg ttg ttt att gtg ggt tta tca gtt atc atc ttc ccc ttt 672
 Glu Leu Val Leu Phe Ile Val Gly Leu Ser Val Ile Ile Phe Pro Phe
 210 215 220

gta ctc atc ttc ttc tcc tat gtc tgc atc atc aga gct gtc ctg gga 720
 Val Leu Ile Phe Phe Ser Tyr Val Cys Ile Ile Arg Ala Val Leu Gly
 225 230 235 240

gta tca tcc aca cag gga aag tgg aaa gcc ttc tcc act tgt ggc tct 768
 Val Ser Ser Thr Gln Gly Lys Trp Lys Ala Phe Ser Thr Cys Gly Ser
 245 250 255

cac ctg aca att gca tta ctg ttc tac gga acc act gta ggc gtg tac 816
 His Leu Thr Ile Ala Leu Leu Phe Tyr Gly Thr Thr Val Gly Val Tyr
 260 265 270

ttt ttc ccc tcc tcc act cac cct gag gac act gat aag att ggt gct 864
 Phe Phe Pro Ser Ser Thr His Pro Glu Asp Thr Asp Lys Ile Gly Ala
 275 280 285

gtc cta ttc act gtg gtg aca ccc atg atg aac ccc ttc atc tac agc 912
 Val Leu Phe Thr Val Val Thr Pro Met Met Asn Pro Phe Ile Tyr Ser
 290 295 300

ttg agg aat aag gat atg aaa ggt gcc ctg aga aag ctc atc aat aga 960
 Leu Arg Asn Lys Asp Met Lys Gly Ala Leu Arg Lys Leu Ile Asn Arg
 305 310 315 320

aaa att tct tcc ctt tga 978
 Lys Ile Ser Ser Leu
 325

<210> 30
 <211> 325
 <212> PRT

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<213> Homo Sapiens

<400> 30

Met Lys Thr Leu Cys Ser Phe Leu Gln Ile Ser Arg Asn Met His Gln
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Glu Asn Gln Thr Thr Ile Thr Glu Phe Ile Leu Leu Gly Leu Ser Asn
 20 25 30

Gln Ala Glu His Gln Asn Leu Leu Phe Val Leu Phe Leu Ser Met Tyr
 35 40 45

Val Val Thr Val Val Gly Asn Gly Leu Ile Ile Val Ala Ile Ser Leu
 50 55 60

Asp Ile Tyr Leu His Thr Pro Met Tyr Leu Phe Leu Ala Tyr Leu Ser
 65 70 75 80

Phe Ala Asp Ile Ser Ser Ile Ser Asn Ser Val Pro Lys Met Leu Val
 85 90 95

Asn Ile Gln Thr Asn Ser Gln Ser Ile Ser Tyr Glu Ser Cys Ile Thr
 100 105 110

Gln Met Tyr Phe Ser Ile Val Phe Val Val Thr Asp Asn Leu Leu Leu
 115 120 125

Gly Thr Met Ala Phe Asp His Phe Val Ala Ile Cys His Pro Leu Asn
 130 135 140

Tyr Thr Thr Phe Met Arg Ala Arg Phe Gly Thr Leu Leu Thr Val Ile
 145 150 155 160

Ser Trp Phe Leu Ser Asn Ile Ile Ala Leu Thr His Thr Leu Leu Leu
 165 170 175

Ile Gln Leu Leu Phe Cys Asp His Asn Thr Leu Pro His Phe Phe Cys
 180 185 190

Asp Leu Ala Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr Met Ile Asn
 195 200 205

Glu Leu Val Leu Phe Ile Val Gly Leu Ser Val Ile Ile Phe Pro Phe
 210 215 220

Val Leu Ile Phe Phe Ser Tyr Val Cys Ile Ile Arg Ala Val Leu Gly

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Met Ala Lys Asn Asn Leu Thr Arg Val Thr Glu Phe Ile Leu Met Gly																
1	5				10					15						
ttt atg gac cac ccc aaa ttg gag att ccc ctc ttt ctg gtg ttt ctg																96
Phe Met Asp His Pro Lys Leu Glu Ile Pro Leu Phe Leu Val Phe Leu																
	20				25					30						
agt ttc tac cta gtc acc ctt ctt ggg aat gtg ggg atg att atg tta																144
Ser Phe Tyr Leu Val Thr Leu Leu Gly Asn Val Gly Met Ile Met Leu																
	35				40					45						
atc caa gta gat gtc aaa ctc tac acc cca atg tac ttc ttc ctg agc																192
Ile Gln Val Asp Val Lys Leu Tyr Thr Pro Met Tyr Phe Phe Leu Ser																
	50				55					60						
cac ctc tcc ctg ctg gat gcc tgt tac acc tca gtc atc acc cct cag																240
His Leu Ser Leu Leu Asp Ala Cys Tyr Thr Ser Val Ile Thr Pro Gln																
65	70				75					80						
atc cta gcc aca ttg gcc aca ggc aaa acg gtc atc tcc tac ggc cac																288
Ile Leu Ala Thr Leu Ala Thr Gly Lys Thr Val Ile Ser Tyr Gly His																

85	90	95	
tgt gct gcc cag ttc ttt tta ttc acc atc tgt gca ggc aca gag tgc Cys Ala Ala Gln Phe Phe Leu Phe Thr Ile Cys Ala Gly Thr Glu Cys 100 105 110			336
ttt ctg ctg gca gtg atg gcc tat gat cgc tat gct gcc att cgc aac Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile Arg Asn 115 120 125			384
cca ctg ctc tat acc gtg gcc atg aat ccc agg ctc tgc tgg agc ctg Pro Leu Leu Tyr Thr Val Ala Met Asn Pro Arg Leu Cys Trp Ser Leu 130 135 140			432
gtg gta gga gcc tat gtc tgt ggg gtg tca gga gcc atc ctg cgt acc Val Val Gly Ala Tyr Val Cys Gly Val Ser Gly Ala Ile Leu Arg Thr 145 150 155 160			480
act tgc acc ttc acc ctc tcc ttc tgt aag gac aat caa ata aac ttc Thr Cys Thr Phe Thr Leu Ser Phe Cys Lys Asp Asn Gln Ile Asn Phe 165 170 175			528
ttc ttc tgt gac ctc cca ccc ctg ctg aag ctt gcc tgc agt gac aca Phe Phe Cys Asp Leu Pro Pro Leu Leu Lys Leu Ala Cys Ser Asp Thr 180 185 190			576
gca aac atc gag att gtc atc atc ttc ttt ggc aat ttt gtg att ttg Ala Asn Ile Glu Ile Val Ile Ile Phe Phe Gly Asn Phe Val Ile Leu 195 200 205			624
gcc aat gcc tcc gtc atc ctg att tcc tat ctg ctc atc atc aag acc Ala Asn Ala Ser Val Ile Leu Ile Ser Tyr Leu Leu Ile Ile Lys Thr 210 215 220			672
att ttg aaa gtg aag tct tca ggt ggc agg gcc aag act ttc tcc aca Ile Leu Lys Val Lys Ser Ser Gly Gly Arg Ala Lys Thr Phe Ser Thr 225 230 235 240			720
tgt gcc tct cac atc act gct gtg gcc ctt ttc ttt gga gcc ctt atc Cys Ala Ser His Ile Thr Ala Val Ala Leu Phe Phe Gly Ala Leu Ile 245 250 255			768
ttc atg tat ctg caa agt ggc tca ggc aaa tct ctg gag gaa gac aaa Phe Met Tyr Leu Gln Ser Gly Ser Gly Lys Ser Leu Glu Glu Asp Lys 260 265 270			816
gtc gtg tct gtc ttc tat aca gtg gtc atc ccc atg ctg aac cct ctg Val Val Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu 275 280 285			864
atc tac agc tta aga aac aaa gat gta aaa gac gcc ttc aga aag gtc Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Arg Lys Val 290 295 300			912
gct agg aga ctc cag gtg tcc ctg agc atg tag Ala Arg Arg Leu Gln Val Ser Leu Ser Met 305 310			945

<210> 32

<211> 314

<212> PRT

<213> Homo Sapiens

<400> 32

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Phe Met Asp His Pro Lys Leu Glu Ile Pro Leu Phe Leu Val Phe Leu
 20 25 30

Ser Phe Tyr Leu Val Thr Leu Leu Gly Asn Val Gly Met Ile Met Leu
 35 40 45

Ile Gln Val Asp Val Lys Leu Tyr Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

His Leu Ser Leu Leu Asp Ala Cys Tyr Thr Ser Val Ile Thr Pro Gln
 65 70 75 80

Ile Leu Ala Thr Leu Ala Thr Gly Lys Thr Val Ile Ser Tyr Gly His
 85 90 95

Cys Ala Ala Gln Phe Phe Leu Phe Thr Ile Cys Ala Gly Thr Glu Cys
 100 105 110

Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile Arg Asn
 115 120 125

Pro Leu Leu Tyr Thr Val Ala Met Asn Pro Arg Leu Cys Trp Ser Leu
 130 135 140

Val Val Gly Ala Tyr Val Cys Gly Val Ser Gly Ala Ile Leu Arg Thr
 145 150 155 160

Thr Cys Thr Phe Thr Leu Ser Phe Cys Lys Asp Asn Gln Ile Asn Phe
 165 170 175

Phe Phe Cys Asp Leu Pro Pro Leu Leu Lys Leu Ala Cys Ser Asp Thr
 180 185 190

Ala Asn Ile Glu Ile Val Ile Ile Phe Phe Gly Asn Phe Val Ile Leu
 195 200 205

Ala Asn Ala Ser Val Ile Leu Ile Ser Tyr Leu Leu Ile Ile Lys Thr
 210 215 220

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Ile Leu Lys Val Lys Ser Ser Gly Gly Arg Ala Lys Thr Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Ile Thr Ala Val Ala Leu Phe Phe Gly Ala Leu Ile
 245 250 255

Phe Met Tyr Leu Gln Ser Gly Ser Gly Lys Ser Leu Glu Glu Asp Lys
 260 265 270

Val Val Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Arg Lys Val
 290 295 300

Ala Arg Arg Leu Gln Val Ser Leu Ser Met
 305 310

<210> 33
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 ttc cct tat tcc tgg gtt aag tct gtt gtc tgc ttt gtt cca ctg ctc 96
 Phe Pro Tyr Ser Trp Val Lys Ser Val Val Cys Phe Val Pro Leu Leu
 20 25 30
 ttc atc tat gct ttc att gtt gtt gga aac ctg gtc atc atc aca gtg 144
 Phe Ile Tyr Ala Phe Ile Val Val Gly Asn Leu Val Ile Ile Thr Val
 35 40 45
 gtc cag ttg aat act cac ctc cac act ccc atg tat act ttt atc agt 192
 Val Gln Leu Asn Thr His Leu His Thr Pro Met Tyr Thr Phe Ile Ser
 50 55 60
 gct ctt tct ttc ctg gag att tgg tat acc aca gcc aca atc cca aag 240
 Ala Leu Ser Phe Leu Glu Ile Trp Tyr Thr Thr Ala Thr Ile Pro Lys
 65 70 75 80
 atg ctg tct agc ctg ctt agt gag agg agc att tcc ttc aat ggt tgt 288
 Met Leu Ser Ser Leu Leu Ser Glu Arg Ser Ile Ser Phe Asn Gly Cys
 85 90 95
 ctc ctg cag atg tat ttc ttc cat tcc acc ggc atc tgt gag gtg tgt 336

Leu Leu Gln Met Tyr Phe Phe His Ser Thr Gly Ile Cys Glu Val Cys	
100 105 110	
ctc ttg aca gtt atg gcc ttt gac cac tac ctg gcc ata tgc agc cct	384
Leu Leu Thr Val Met Ala Phe Asp His Tyr Leu Ala Ile Cys Ser Pro	
115 120 125	
ctt cat tat ccc tct atc atg acc ccc aag cta tgt acc caa ctg act	432
Leu His Tyr Pro Ser Ile Met Thr Pro Lys Leu Cys Thr Gln Leu Thr	
130 135 140	
tta agt tgc tgt gtt tgt ggc ttt atc aca ccc ctt cct gag att gcc	480
Leu Ser Cys Cys Val Cys Gly Phe Ile Thr Pro Leu Pro Glu Ile Ala	
145 150 155 160	
tgg atc tct aca ctg cca ttt tgt ggt tcg aat cac ctt gaa cat atc	528
Trp Ile Ser Thr Leu Pro Phe Cys Gly Ser Asn His Leu Glu His Ile	
165 170 175	
ttc tgt gac ttc ctc cca gtg ctg cgt ctg gcc tgc aca gac aca cga	576
Phe Cys Asp Phe Leu Pro Val Leu Arg Leu Ala Cys Thr Asp Thr Arg	
180 185 190	
gcc atc gtc atg att cag gta gtg gat gtc att cat gca gtg gag att	624
Ala Ile Val Met Ile Gln Val Val Asp Val Ile His Ala Val Glu Ile	
195 200 205	
att aca gct gtg atg ctc atc ttc atg tcc tac gat ggt att gtg gct	672
Ile Thr Ala Val Met Leu Ile Phe Met Ser Tyr Asp Gly Ile Val Ala	
210 215 220	
gta att cta cgt att cat tca gct gga ggc cgc cgg cac agc att ttc	720
Val Ile Leu Arg Ile His Ser Ala Gly Gly Arg Arg His Ser Ile Phe	
225 230 235 240	
cac gtg tgt ctc tca ctt cat tgt ctt ttc gct ctt ctt tgg cag tgt	768
His Val Cys Leu Ser Leu His Cys Leu Phe Ala Leu Leu Trp Gln Cys	
245 250 255	
gac tct cat gta cct acg ctt ctc tgc cac cta ctc ttt gtt ctg gga	816
Asp Ser His Val Pro Thr Leu Leu Cys His Leu Leu Phe Val Leu Gly	
260 265 270	
tat agc cat tgc tct ggc ctt tgc agt ttt gtc tcc ctt ctt caa ccc	864
Tyr Ser His Cys Ser Gly Leu Cys Ser Phe Val Ser Leu Leu Gln Pro	
275 280 285	
cat tat cta tag	876
His Tyr Leu	
290	
<210> 34	
<211> 291	
<212> PRT	
<213> Homo Sapiens	
<400> 34	
Met Glu Ser Pro Asn Arg Thr Thr Ile Gln Glu Phe Ile Phe Ser Ala	
1 5 10 15	

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Phe Pro Tyr Ser Trp Val Lys Ser Val Val Cys Phe Val Pro Leu Leu
 20 25 30

Phe Ile Tyr Ala Phe Ile Val Val Gly Asn Leu Val Ile Ile Thr Val
 35 40 45

Val Gln Leu Asn Thr His Leu His Thr Pro Met Tyr Thr Phe Ile Ser
 50 55 60

Ala Leu Ser Phe Leu Glu Ile Trp Tyr Thr Thr Ala Thr Ile Pro Lys
 65 70 75 80

Met Leu Ser Ser Leu Leu Ser Glu Arg Ser Ile Ser Phe Asn Gly Cys
 85 90 95

Leu Leu Gln Met Tyr Phe Phe His Ser Thr Gly Ile Cys Glu Val Cys
 100 105 110

Leu Leu Thr Val Met Ala Phe Asp His Tyr Leu Ala Ile Cys Ser Pro
 115 120 125

Leu His Tyr Pro Ser Ile Met Thr Pro Lys Leu Cys Thr Gln Leu Thr
 130 135 140

Leu Ser Cys Cys Val Cys Gly Phe Ile Thr Pro Leu Pro Glu Ile Ala
 145 150 155 160

Trp Ile Ser Thr Leu Pro Phe Cys Gly Ser Asn His Leu Glu His Ile
 165 170 175

Phe Cys Asp Phe Leu Pro Val Leu Arg Leu Ala Cys Thr Asp Thr Arg
 180 185 190

Ala Ile Val Met Ile Gln Val Val Asp Val Ile His Ala Val Glu Ile
 195 200 205

Ile Thr Ala Val Met Leu Ile Phe Met Ser Tyr Asp Gly Ile Val Ala
 210 215 220

Val Ile Leu Arg Ile His Ser Ala Gly Gly Arg Arg His Ser Ile Phe
 225 230 235 240

His Val Cys Leu Ser Leu His Cys Leu Phe Ala Leu Leu Trp Gln Cys
 245 250 255

Asp Ser His Val Pro Thr Leu Leu Cys His Leu Leu Phe Val Leu Gly
 260 265 270

Tyr Ser His Cys Ser Gly Leu Cys Ser Phe Val Ser Leu Leu Gln Pro
 275 280 285

His Tyr Leu
 290

<210> 35
 <211> 939
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1) .. (936)
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<400> 35
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 Met Asp Thr Gly Asn Trp Ser Gln Val Ala Glu Phe Ile Ile Leu Gly
 1 5 10 15
 ttc ccc cat ctc cag ggt gtc cag att tat ctc ttc ctc ttg ttg ctt 96
 Phe Pro His Leu Gln Gly Val Gln Ile Tyr Leu Phe Leu Leu Leu
 20 25 30
 ctc att tac ctc atg act gtg ttg gga aac ctg ctg ata ttc ctg gtg 144
 Leu Ile Tyr Leu Met Thr Val Leu Gly Asn Leu Leu Ile Phe Leu Val
 35 40 45
 gtc tgc ctg gac tcc cgg ctt cac aca ccc atg tac cac ttt gtc agc 192
 Val Cys Leu Asp Ser Arg Leu His Thr Pro Met Tyr His Phe Val Ser
 50 55 60
 att ctc tcc ttc tca gag ctt ggc tat aca gct gcc acc atc cct aag 240
 Ile Leu Ser Phe Ser Glu Leu Gly Tyr Thr Ala Ala Thr Ile Pro Lys
 65 70 75 80
 atg ctg gca aac ttg ctc agt gag aaa aag acc att tca ttc tct ggg 288
 Met Leu Ala Asn Leu Leu Ser Glu Lys Lys Thr Ile Ser Phe Ser Gly
 85 90 95
 tgt ctc ctg cag atc tat ttc ttt cac tcc ctt gga gcg act gag tgc 336
 Cys Leu Leu Gln Ile Tyr Phe Phe His Ser Leu Gly Ala Thr Glu Cys
 100 105 110
 tat ctc ctg aca gct atg gcc tac gat agg tat tta gcc atc tgc cgg 384
 Tyr Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Arg
 115 120 125
 ccc ctc cac tac cca acc ctc atg acc cca aca ctt tgt gca gag att 432
 Pro Leu His Tyr Pro Thr Leu Met Thr Pro Thr Leu Cys Ala Glu Ile
 130 135 140

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gcc att ggc tgt tgg ttg gga ggc ttg gct ggg cca gta gtt gaa att 480
 Ala Ile Gly Cys Trp Leu Gly Gly Leu Ala Gly Pro Val Val Glu Ile 160
 145 150 155
 tcc ttg att tca cgc ctc cca ttc tgt ggc ccc aat cgc att cag cac 528
 Ser Leu Ile Ser Arg Leu Pro Phe Cys Gly Pro Asn Arg Ile Gln His 175
 165 170
 gtc ttt tgt gac ttc cct cct gtg ctg agt ttg gct tgc act gat acg 576
 Val Phe Cys Asp Phe Pro Pro Val Leu Ser Leu Ala Cys Thr Asp Thr 190
 180 185
 tct ata aat gtc cta gta gat ttt gtt ata aat tcc tgc aag atc cta 624
 Ser Ile Asn Val Leu Val Asp Phe Val Ile Asn Ser Cys Lys Ile Leu 205
 195 200
 gcc acc ttc ctg ctg atc ctc tgc tcc tat gtg cag atc atc tgc aca 672
 Ala Thr Phe Leu Leu Ile Leu Cys Ser Tyr Val Gln Ile Ile Cys Thr 220
 210 215
 gtg ctc aga att ccc tca gct gcc ggc aag agg aag gcc atc tcc acg 720
 Val Leu Arg Ile Pro Ser Ala Ala Gly Lys Arg Lys Ala Ile Ser Thr 240
 225 230 235
 tgt gcc tcc cac ttc act gtg gtt ctc atc ttc tat ggg agc atc ctt 768
 Cys Ala Ser His Phe Thr Val Val Leu Ile Phe Tyr Gly Ser Ile Leu 255
 245 250
 tcc atg tat gtg cag ctg aag aag agc tac tca ctg gac tat gac cag 816
 Ser Met Tyr Val Gln Leu Lys Lys Ser Tyr Ser Leu Asp Tyr Asp Gln 270
 260 265
 gcc ctg gca gtg gtc tac tca gtg ctc aca ccc ttc ctc aac ccc ttc 864
 Ala Leu Ala Val Val Tyr Ser Val Leu Thr Pro Phe Leu Asn Pro Phe 285
 275 280
 atc tac agc ttg cgc aac aag gag atc aag gag gct gtg agg agg cag 912
 Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Glu Ala Val Arg Arg Gln 300
 290 295
 cta aag aga att ggg ata ttg gca tga 939
 Leu Lys Arg Ile Gly Ile Leu Ala 310
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<210> 36
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 36

Met Asp Thr Gly Asn Trp Ser Gln Val Ala Glu Phe Ile Ile Leu Gly 15
 1 5 10

Phe Pro His Leu Gln Gly Val Gln Ile Tyr Leu Phe Leu Leu Leu 30
 20 25

Leu Ile Tyr Leu Met Thr Val Leu Gly Asn Leu Leu Ile Phe Leu Val

35	40	45
Val Cys Leu Asp Ser Arg Leu His Thr Pro Met Tyr His Phe Val Ser		
50	55	60
Ile Leu Ser Phe Ser Glu Leu Gly Tyr Thr Ala Ala Thr Ile Pro Lys		
65	70	75
Met Leu Ala Asn Leu Leu Ser Glu Lys Lys Thr Ile Ser Phe Ser Gly		
	85	90
Cys Leu Leu Gln Ile Tyr Phe Phe His Ser Leu Gly Ala Thr Glu Cys		
	100	105
Tyr Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Arg		
	115	120
Pro Leu His Tyr Pro Thr Leu Met Thr Pro Thr Leu Cys Ala Glu Ile		
	130	135
Ala Ile Gly Cys Trp Leu Gly Gly Leu Ala Gly Pro Val Val Glu Ile		
	145	150
Ser Leu Ile Ser Arg Leu Pro Phe Cys Gly Pro Asn Arg Ile Gln His		
	165	170
Val Phe Cys Asp Phe Pro Pro Val Leu Ser Leu Ala Cys Thr Asp Thr		
	180	185
Ser Ile Asn Val Leu Val Asp Phe Val Ile Asn Ser Cys Lys Ile Leu		
	195	200
Ala Thr Phe Leu Leu Ile Leu Cys Ser Tyr Val Gln Ile Ile Cys Thr		
	210	215
Val Leu Arg Ile Pro Ser Ala Ala Gly Lys Arg Lys Ala Ile Ser Thr		
	225	230
Cys Ala Ser His Phe Thr Val Val Leu Ile Phe Tyr Gly Ser Ile Leu		
	245	250
Ser Met Tyr Val Gln Leu Lys Lys Ser Tyr Ser Leu Asp Tyr Asp Gln		
	260	265
Ala Leu Ala Val Val Tyr Ser Val Leu Thr Pro Phe Leu Asn Pro Phe		
	275	280
		285

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Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Glu Ala Val Arg Arg Gln
 290 295 300

Leu Lys Arg Ile Gly Ile Leu Ala
 305 310

<210> 37
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1) .. (942)
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<400> 37 48
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 ctt tca cag gac ttg cag acc cag atc ctg cta ttt atc ctt ttc ctc 96
 Leu Ser Gln Asp Leu Gln Thr Gln Ile Leu Leu Phe Ile Leu Phe Leu
 20 25 30
 atc att tat ctg ctg acc gtg ctt gga aac cag ctc atc atc att ctc 144
 Ile Ile Tyr Leu Leu Thr Val Leu Gly Asn Gln Leu Ile Ile Ile Leu
 35 40 45
 atc ttc ctg gat tct cgc ctt cac act ccc atg tat ttt ttt ctt aga 192
 Ile Phe Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Arg
 50 55 60
 aat ctc tcc ttt gca gat ctc tgt ttc tct act agc att gtc cct caa 240
 Asn Leu Ser Phe Ala Asp Leu Cys Phe Ser Thr Ser Ile Val Pro Gln
 65 70 75 80
 gtg ttg gtt cac ttc ttg gta aag agg aaa acc att tct ttt tat ggg 288
 Val Leu Val His Phe Leu Val Lys Arg Lys Thr Ile Ser Phe Tyr Gly
 85 90 95
 tgt atg aca cag ata att gtc ttt ctt ctg gtt ggg tgt aca gag tgt 336
 Cys Met Thr Gln Ile Ile Val Phe Leu Leu Val Gly Cys Thr Glu Cys
 100 105 110
 gcg ctg ctg gca gtg atg tcc tat gac cgg tat gtg gct gtc tgc aag 384
 Ala Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Val Cys Lys
 115 120 125
 ccc ctg tac tac tct acc atc atg aca caa cgg gtg tgt ctc tgg ctg 432
 Pro Leu Tyr Tyr Ser Thr Ile Met Thr Gln Arg Val Cys Leu Trp Leu
 130 135 140
 tcc ttc agg tcc tgg gcc agt ggg gca cta gtg tct tta gta gat acc 480
 Ser Phe Arg Ser Trp Ala Ser Gly Ala Leu Val Ser Leu Val Asp Thr
 145 150 155 160

agc ttt act ttc cat ctt ccc tac tgg gga cag aat ata atc aat cac 528
 Ser Phe Thr Phe His Leu Pro Tyr Trp Gly Gln Asn Ile Ile Asn His
 165 170 175

tac ttt tgt gaa cct cct gcc ctc ctg aag ctg gct tcc ata gac act 576
 Tyr Phe Cys Glu Pro Pro Ala Leu Leu Lys Leu Ala Ser Ile Asp Thr
 180 185 190

tac agc aca gaa atg gcc atc ttt tca atg ggc gtg gta atc ctc ctg 624
 Tyr Ser Thr Glu Met Ala Ile Phe Ser Met Gly Val Val Ile Leu Leu
 195 200 205

gcc cct gtc tcc ctg att ctt ggt tct tat tgg aat att atc tcc act 672
 Ala Pro Val Ser Leu Ile Leu Gly Ser Tyr Trp Asn Ile Ile Ser Thr
 210 215 220

gtt atc cag atg cag tct ggg gaa ggg aga ctc aag gct ttt tcc acc 720
 Val Ile Gln Met Gln Ser Gly Glu Gly Arg Leu Lys Ala Phe Ser Thr
 225 230 235 240

tgt ggc tcc cat ctt att gtt gtt gtc ctc ttc tat ggg tca gga ata 768
 Cys Gly Ser His Leu Ile Val Val Val Leu Phe Tyr Gly Ser Gly Ile
 245 250 255

ttc acc tac atg cga cca aac tcc aag act aca aaa gaa ctg gat aaa 816
 Phe Thr Tyr Met Arg Pro Asn Ser Lys Thr Thr Lys Glu Leu Asp Lys
 260 265 270

atg ata tct gtg ttc tat aca gcg gtg act cca atg ttg aac ccc ata 864
 Met Ile Ser Val Phe Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Ile
 275 280 285

att tat agc ttg agg aac aaa gat gtc aaa ggg gct ctc agg aaa cta 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Arg Lys Leu
 290 295 300

gtt ggg aga aag tgc ttc tct cat agg cag tga 945
 Val Gly Arg Lys Cys Phe Ser His Arg Gln
 305 310

<210> 38
 <211> 314
 <212> PRT
 <213> Homo Sapiens

<400> 38

Met Gly Glu Glu Asn Gln Thr Phe Val Ser Lys Phe Ile Phe Leu Gly
1 5 10 15

Leu Ser Gln Asp Leu Gln Thr Gln Ile Leu Leu Phe Ile Leu Phe Leu
20 25 30

Ile Ile Tyr Leu Leu Thr Val Leu Gly Asn Gln Leu Ile Ile Ile Leu
35 40 45

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Ile Phe Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Arg
 50 55 60

Asn Leu Ser Phe Ala Asp Leu Cys Phe Ser Thr Ser Ile Val Pro Gln
 65 70 75 80

Val Leu Val His Phe Leu Val Lys Arg Lys Thr Ile Ser Phe Tyr Gly
 85 90 95

Cys Met Thr Gln Ile Ile Val Phe Leu Leu Val Gly Cys Thr Glu Cys
 100 105 110

Ala Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Val Cys Lys
 115 120 125

Pro Leu Tyr Tyr Ser Thr Ile Met Thr Gln Arg Val Cys Leu Trp Leu
 130 135 140

Ser Phe Arg Ser Trp Ala Ser Gly Ala Leu Val Ser Leu Val Asp Thr
 145 150 155 160

Ser Phe Thr Phe His Leu Pro Tyr Trp Gly Gln Asn Ile Ile Asn His
 165 170 175

Tyr Phe Cys Glu Pro Pro Ala Leu Leu Lys Leu Ala Ser Ile Asp Thr
 180 185 190

Tyr Ser Thr Glu Met Ala Ile Phe Ser Met Gly Val Val Ile Leu Leu
 195 200 205

Ala Pro Val Ser Leu Ile Leu Gly Ser Tyr Trp Asn Ile Ile Ser Thr
 210 215 220

Val Ile Gln Met Gln Ser Gly Glu Gly Arg Leu Lys Ala Phe Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Ile Val Val Val Leu Phe Tyr Gly Ser Gly Ile
 245 250 255

Phe Thr Tyr Met Arg Pro Asn Ser Lys Thr Thr Lys Glu Leu Asp Lys
 260 265 270

Met Ile Ser Val Phe Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Ile
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Arg Lys Leu

290

295

300

Val Gly Arg Lys Cys Phe Ser His Arg Gln
305 310

<210> 39
<211> 918
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(915)
<223>

<400> 39
atg gag ccc acc ttt gcc ctt tta ggt ttc aca gat tac cca aag ctt 48
Met Glu Pro Thr Phe Ala Leu Leu Gly Phe Thr Asp Tyr Pro Lys Leu
1 5 10 15
cag att cct ctc ttc ctt gtg ttt ctg ctc atg tat gtt atc aca gtg 96
Gln Ile Pro Leu Phe Leu Val Phe Leu Leu Met Tyr Val Ile Thr Val
20 25 30
gta gga aac ctt ggg atg atc ata ata atc aag att aac ccc aaa ttt 144
Val Gly Asn Leu Gly Met Ile Ile Ile Ile Lys Ile Asn Pro Lys Phe
35 40 45
cac act cct atg tac ttt ttc ctt agt cac ctc tct ttt gtt gat ttt 192
His Thr Pro Met Tyr Phe Phe Leu Ser His Leu Ser Phe Val Asp Phe
50 55 60
tgt tac tct tcc att gtc act ccc aag ctg ctt gag aac ttg gta atg 240
Cys Tyr Ser Ser Ile Val Thr Pro Lys Leu Leu Glu Asn Leu Val Met
65 70 75 80
gca gat aaa agc atc ttc tac ttt agc tgc atg atg cag tac ttc ctg 288
Ala Asp Lys Ser Ile Phe Tyr Phe Ser Cys Met Met Gln Tyr Phe Leu
85 90 95
tcc tgc act gct gtg gtg aca gag tct ttc ttg ctg gca gtg atg gcc 336
Ser Cys Thr Ala Val Val Thr Glu Ser Phe Leu Leu Ala Val Met Ala
100 105 110
tat gac cgc ttt gtg gcc atc tgc aat cct ctg ctt tat aca gtg gcc 384
Tyr Asp Arg Phe Val Ala Ile Cys Asn Pro Leu Leu Tyr Thr Val Ala
115 120 125
atg tca cag agg ctc tgt gcc ctg ctg gtg gct ggg tca tat ctc tgg 432
Met Ser Gln Arg Leu Cys Ala Leu Leu Val Ala Gly Ser Tyr Leu Trp
130 135 140
ggc atg ttt ggc ccc ttg gta ctc ctt tgt tat gct ctc cgg tta aac 480
Gly Met Phe Gly Pro Leu Val Leu Leu Cys Tyr Ala Leu Arg Leu Asn
145 150 155 160
ttc tct gga cct aat gta atc aac cac ttc ttt tgt gag tat act gct 528
Phe Ser Gly Pro Asn Val Ile Asn His Phe Phe Cys Glu Tyr Thr Ala

	165	170	175	
ctc atc tct gtg tct ggc tct gat ata ctc atc ccc cac ctg ctg ctt				576
Leu Ile Ser Val Ser Gly Ser Asp Ile Leu Ile Pro His Leu Leu Leu				
	180	185	190	
ttc agc ttc gcc acc ttc aat gag atg tgt aca cta ctg atc atc ctc				624
Phe Ser Phe Ala Thr Phe Asn Glu Met Cys Thr Leu Leu Ile Ile Leu				
	195	200	205	
act tcc tat gtt ttc att ttt gtg act gta cta aaa atc cgt tct gtt				672
Thr Ser Tyr Val Phe Ile Phe Val Thr Val Leu Lys Ile Arg Ser Val				
	210	215	220	
agt ggg cgc cac aaa gcc ttc tcc acc tgg gcc tcc cac ctg act gct				720
Ser Gly Arg His Lys Ala Phe Ser Thr Trp Ala Ser His Leu Thr Ala				
	225	230	235	240
atc acc atc ttc cat ggg acc atc ctt ttc ctt tac tgt gta ccc aac				768
Ile Thr Ile Phe His Gly Thr Ile Leu Phe Leu Tyr Cys Val Pro Asn				
	245	250		255
tcc aaa aac tct cgg caa aca gtc aaa gtg gcc tct gta ttt tac aca				816
Ser Lys Asn Ser Arg Gln Thr Val Lys Val Ala Ser Val Phe Tyr Thr				
	260	265		270
gtt gtc aac ccc atg ctg aac cct ccg atc tac agc cta agg aat aaa				864
Val Val Asn Pro Met Leu Asn Pro Pro Ile Tyr Ser Leu Arg Asn Lys				
	275	280		285
gac gtg aag gat gct ttc tgg aag tta ata cat aca caa gtt cca ttt				912
Asp Val Lys Asp Ala Phe Trp Lys Leu Ile His Thr Gln Val Pro Phe				
	290	295		300
cac tga				918
His				
305				

<210> 40
 <211> 305
 <212> PRT
 <213> Homo Sapiens

<400> 40

Met Glu Pro Thr Phe Ala Leu Leu Gly Phe Thr Asp Tyr Pro Lys Leu			
1	5	10	15

Gln Ile Pro Leu Phe Leu Val Phe Leu Leu Met Tyr Val Ile Thr Val			
20	25		30

Val Gly Asn Leu Gly Met Ile Ile Ile Ile Lys Ile Asn Pro Lys Phe			
35	40		45

His Thr Pro Met Tyr Phe Phe Leu Ser His Leu Ser Phe Val Asp Phe			
50	55		60

Cys Tyr Ser Ser Ile Val Thr Pro Lys Leu Leu Glu Asn Leu Val Met
65 70 75 80

Ala Asp Lys Ser Ile Phe Tyr Phe Ser Cys Met Met Gln Tyr Phe Leu
85 90 95

Ser Cys Thr Ala Val Val Thr Glu Ser Phe Leu Leu Ala Val Met Ala
100 105 110

Tyr Asp Arg Phe Val Ala Ile Cys Asn Pro Leu Leu Tyr Thr Val Ala
115 120 125

Met Ser Gln Arg Leu Cys Ala Leu Leu Val Ala Gly Ser Tyr Leu Trp
130 135 140

Gly Met Phe Gly Pro Leu Val Leu Leu Cys Tyr Ala Leu Arg Leu Asn
145 150 155 160

Phe Ser Gly Pro Asn Val Ile Asn His Phe Phe Cys Glu Tyr Thr Ala
165 170 175

Leu Ile Ser Val Ser Gly Ser Asp Ile Leu Ile Pro His Leu Leu Leu
180 185 190

Phe Ser Phe Ala Thr Phe Asn Glu Met Cys Thr Leu Leu Ile Ile Leu
195 200 205

Thr Ser Tyr Val Phe Ile Phe Val Thr Val Leu Lys Ile Arg Ser Val
210 215 220

Ser Gly Arg His Lys Ala Phe Ser Thr Trp Ala Ser His Leu Thr Ala
225 230 235 240

Ile Thr Ile Phe His Gly Thr Ile Leu Phe Leu Tyr Cys Val Pro Asn
245 250 255

Ser Lys Asn Ser Arg Gln Thr Val Lys Val Ala Ser Val Phe Tyr Thr
260 265 270

Val Val Asn Pro Met Leu Asn Pro Pro Ile Tyr Ser Leu Arg Asn Lys
275 280 285

Asp Val Lys Asp Ala Phe Trp Lys Leu Ile His Thr Gln Val Pro Phe
290 295 300

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His
305

<210> 41
 <211> 930
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (927)
 <223>

<400> 41 48
 atg gaa aat caa aac aat gtg act gaa ttc att ctt ctg ggt ctc aca
 Met Glu Asn Gln Asn Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 gag aac ctg gag ctg tgg aaa ata ttt tct gct gtg ttt ctt gtc atg 96
 Glu Asn Leu Glu Leu Trp Lys Ile Phe Ser Ala Val Phe Leu Val Met
 20 25 30
 tat gta gcc aca gtg ctg gaa aat cta ctt att gtg gta act att atc 144
 Tyr Val Ala Thr Val Leu Glu Asn Leu Leu Ile Val Val Thr Ile Ile
 35 40 45
 aca agt cag agt ctg agg tca cct atg tat ttt ttt ctt acc ttc ttg 192
 Thr Ser Gln Ser Leu Arg Ser Pro Met Tyr Phe Phe Leu Thr Phe Leu
 50 55 60
 tcc ctt ttg gat gtc atg ttc tca tct gtc gtt gcc ccc aag gtg att 240
 Ser Leu Leu Asp Val Met Phe Ser Ser Val Val Ala Pro Lys Val Ile
 65 70 75 80
 gta gac acc ctc tcc aag agc act acc atc tct ctc aaa ggc tgc ctc 288
 Val Asp Thr Leu Ser Lys Ser Thr Thr Ile Ser Leu Lys Gly Cys Leu
 85 90 95
 acc cag ctg ttt gtg gag cat ttc ttt ggt ggt gtg ggg atc atc ctc 336
 Thr Gln Leu Phe Val Glu His Phe Phe Gly Gly Val Gly Ile Ile Leu
 100 105 110
 ctc act gtg atg gcc tat gac cgc tac gtg gcc atc tgt aag ccc ctg 384
 Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
 115 120 125
 cac tac acg atc atc atg agt cca cgg gtg tgc tgc cta atg gta gga 432
 His Tyr Thr Ile Ile Met Ser Pro Arg Val Cys Cys Leu Met Val Gly
 130 135 140
 ggg gct tgg gtg ggg gga ttt atg cac gca atg ata caa ctt ctc ttc 480
 Gly Ala Trp Val Gly Gly Phe Met His Ala Met Ile Gln Leu Leu Phe
 145 150 155 160
 atg tat caa ata ccc ttc tgt ggt cct aat atc ata gat cac ttt ata 528
 Met Tyr Gln Ile Pro Phe Cys Gly Pro Asn Ile Ile Asp His Phe Ile
 165 170 175
 tgt gat ttg ttt cag ttg ttg aca ctt gcc tgc acg gac acc cac atc 576

Cys Asp Leu Phe Gln Leu Leu Thr Leu Ala Cys Thr Asp Thr His Ile
 180 185 190
 ctg ggc ctc tta gtt acc ctc aac agt ggg atg atg tgt gtg gcc atc 624
 Leu Gly Leu Leu Val Thr Leu Asn Ser Gly Met Met Cys Val Ala Ile
 195 200 205
 ttt ctt atc tta att gcg tcc tac acg gtc atc cta tgc tcc ctg aag 672
 Phe Leu Ile Leu Ile Ala Ser Tyr Thr Val Ile Leu Cys Ser Leu Lys
 210 215 220
 tct tac agc tct aaa ggg cgg cac aaa gcc ctc tct acc tgc agc tcc 720
 Ser Tyr Ser Ser Lys Gly Arg His Lys Ala Leu Ser Thr Cys Ser Ser
 225 230 235 240
 cac ctc acg gtg gtt gta ttg ttc ttt gtc ccc tgt att ttc ttg tac 768
 His Leu Thr Val Val Val Leu Phe Phe Val Pro Cys Ile Phe Leu Tyr
 245 250 255
 atg agg cct gtg gtc act cac ccc ata gac aag gca atg gct gtg tca 816
 Met Arg Pro Val Val Thr His Pro Ile Asp Lys Ala Met Ala Val Ser
 260 265 270
 gac tca atc atc aca ccc atg tta aat ccc ttg atc tat aca ctg agg 864
 Asp Ser Ile Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg
 275 280 285
 aat gca gag gtg aaa agt gcc atg aag aaa ctc tgg atg aaa tgg gag 912
 Asn Ala Glu Val Lys Ser Ala Met Lys Lys Leu Trp Met Lys Trp Glu
 290 295 300
 gct ttg gct ggg aaa taa 930
 Ala Leu Ala Gly Lys
 305
 <210> 42
 <211> 309
 <212> PRT
 <213> Homo Sapiens
 <400> 42
 Met Glu Asn Gln Asn Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 Glu Asn Leu Glu Leu Trp Lys Ile Phe Ser Ala Val Phe Leu Val Met
 20 25 30
 Tyr Val Ala Thr Val Leu Glu Asn Leu Leu Ile Val Val Thr Ile Ile
 35 40 45
 Thr Ser Gln Ser Leu Arg Ser Pro Met Tyr Phe Phe Leu Thr Phe Leu
 50 55 60
 Ser Leu Leu Asp Val Met Phe Ser Ser Val Val Ala Pro Lys Val Ile
 65 70 75 80

Val Asp Thr Leu Ser Lys Ser Thr Thr Ile Ser Leu Lys Gly Cys Leu
85 90 95

Thr Gln Leu Phe Val Glu His Phe Phe Gly Gly Val Gly Ile Ile Leu
100 105 110

Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125

His Tyr Thr Ile Ile Met Ser Pro Arg Val Cys Cys Leu Met Val Gly
130 135 140

Gly Ala Trp Val Gly Gly Phe Met His Ala Met Ile Gln Leu Leu Phe
145 150 155 160

Met Tyr Gln Ile Pro Phe Cys Gly Pro Asn Ile Ile Asp His Phe Ile
165 170 175

Cys Asp Leu Phe Gln Leu Leu Thr Leu Ala Cys Thr Asp Thr His Ile
180 185 190

Leu Gly Leu Leu Val Thr Leu Asn Ser Gly Met Met Cys Val Ala Ile
195 200 205

Phe Leu Ile Leu Ile Ala Ser Tyr Thr Val Ile Leu Cys Ser Leu Lys
210 215 220

Ser Tyr Ser Ser Lys Gly Arg His Lys Ala Leu Ser Thr Cys Ser Ser
225 230 235 240

His Leu Thr Val Val Val Leu Phe Phe Val Pro Cys Ile Phe Leu Tyr
245 250 255

Met Arg Pro Val Val Thr His Pro Ile Asp Lys Ala Met Ala Val Ser
260 265 270

Asp Ser Ile Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg
275 280 285

Asn Ala Glu Val Lys Ser Ala Met Lys Lys Leu Trp Met Lys Trp Glu
290 295 300

Ala Leu Ala Gly Lys
305

<210> 43
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

<400> 43
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 Met Gly Lys Glu Asn Cys Thr Thr Val Ala Glu Phe Ile Leu Leu Gly
 1 5 10 15
 cta tca gat gtc cct gag ttg aga gtc tgc ctc ttc ctg ctg ttc ctt 96
 Leu Ser Asp Val Pro Glu Leu Arg Val Cys Leu Phe Leu Leu Phe Leu
 20 25 30
 ctc atc tat gga gtc acg ttg tta gcc aac ctg ggc atg att gca ctg 144
 Leu Ile Tyr Gly Val Thr Leu Leu Ala Asn Leu Gly Met Ile Ala Leu
 35 40 45
 att cag gtc agc tct cgg ctc cac acc ccc atg tac ttt ttc ctc agc 192
 Ile Gln Val Ser Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 cac ttg tcc tct gta gat ttc tgc tac tcc tca ata att gtg cca aaa 240
 His Leu Ser Ser Val Asp Phe Cys Tyr Ser Ser Ile Ile Val Pro Lys
 65 70 75 80
 atg ttg gct aat atc ttt aac aag gac aaa gcc atc tcc ttc cta ggg 288
 Met Leu Ala Asn Ile Phe Asn Lys Asp Lys Ala Ile Ser Phe Leu Gly
 85 90 95
 tgc atg gtg caa ttc tac ttg ttt tgc act tgt gtg gtc act gag gtc 336
 Cys Met Val Gln Phe Tyr Leu Phe Cys Thr Cys Val Val Thr Glu Val
 100 105 110
 ttc ctg ctg gcc gtg atg gcc tat gac cgc ttt gtg gcc atc tgt aac 384
 Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn
 115 120 125
 cct ttg cta tac aca gtc acc atg tct tgg aag gtg cgt gtg gag ctg 432
 Pro Leu Leu Tyr Thr Val Thr Met Ser Trp Lys Val Arg Val Glu Leu
 130 135 140
 gct tct tgc tgc tac ttc tgt ggg acg gtg tgt tct ctg att cat ttg 480
 Ala Ser Cys Cys Tyr Phe Cys Gly Thr Val Cys Ser Leu Ile His Leu
 145 150 155 160
 tgc tta gct ctt agg atc ccc ttc tat aga tct aat gtg att aac cac 528
 Cys Leu Ala Leu Arg Ile Pro Phe Tyr Arg Ser Asn Val Ile Asn His
 165 170 175
 ttt ttc tgt gat cta cct cct gtc tta agt ctt gct tgc tct gat atc 576
 Phe Phe Cys Asp Leu Pro Pro Val Leu Ser Leu Ala Cys Ser Asp Ile
 180 185 190

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act gtg aat gag aca ctg ctg ttc ctg gtg gcc act ttg aat gag agt 624
 Thr Val Asn Glu Thr Leu Leu Phe Leu Val Ala Thr Leu Asn Glu Ser
 195 200 205

gtt acc atc atg atc atc ctc acc tcc tac ctg cta att ctc acc acc 672
 Val Thr Ile Met Ile Ile Leu Thr Ser Tyr Leu Leu Ile Leu Thr Thr
 210 215 220

atc ctg aag atg ggc tct gca gag ggc agg cac aaa gcc ttc tcc acc 720
 Ile Leu Lys Met Gly Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240

tgt gct tcc cac ctc aca gct atc act gtc ttc cat gga aca gtc ctt 768
 Cys Ala Ser His Leu Thr Ala Ile Thr Val Phe His Gly Thr Val Leu
 245 250 255

tcc att tat tgc agg ccc agt tca ggc aat agt gga gat gct gac aaa 816
 Ser Ile Tyr Cys Arg Pro Ser Ser Gly Asn Ser Gly Asp Ala Asp Lys
 260 265 270

gtg gcc acc gtg ttc tac aca gtc gtg att cct atg ctg aac tct gtg 864
 Val Ala Thr Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Ser Val
 275 280 285

atc tac agc ctg aga aat aaa gat gtg aaa gaa gct ctc aga aaa gtg 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Arg Lys Val
 290 295 300

atg ggc tcc aaa att cac tcc tag 936
 Met Gly Ser Lys Ile His Ser
 305 310

<210> 44
 <211> 311
 <212> PRT
 <213> Homo Sapiens

<400> 44

Met Gly Lys Glu Asn Cys Thr Thr Val Ala Glu Phe Ile Leu Leu Gly
 1 5 10 15

Leu Ser Asp Val Pro Glu Leu Arg Val Cys Leu Phe Leu Leu Phe Leu
 20 25 30

Leu Ile Tyr Gly Val Thr Leu Leu Ala Asn Leu Gly Met Ile Ala Leu
 35 40 45

Ile Gln Val Ser Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

His Leu Ser Ser Val Asp Phe Cys Tyr Ser Ser Ile Ile Val Pro Lys
 65 70 75 80

Met Leu Ala Asn Ile Phe Asn Lys Asp Lys Ala Ile Ser Phe Leu Gly

85										90					95				
Cys	Met	Val	Gln	Phe	Tyr	Leu	Phe	Cys	Thr	Cys	Val	Val	Thr	Glu	Val				
			100						105					110					
Phe	Leu	Leu	Ala	Val	Met	Ala	Tyr	Asp	Arg	Phe	Val	Ala	Ile	Cys	Asn				
			115					120					125						
Pro	Leu	Leu	Tyr	Thr	Val	Thr	Met	Ser	Trp	Lys	Val	Arg	Val	Glu	Leu				
			130				135						140						
Ala	Ser	Cys	Cys	Tyr	Phe	Cys	Gly	Thr	Val	Cys	Ser	Leu	Ile	His	Leu				
						150						155			160				
Cys	Leu	Ala	Leu	Arg	Ile	Pro	Phe	Tyr	Arg	Ser	Asn	Val	Ile	Asn	His				
				165					170					175					
Phe	Phe	Cys	Asp	Leu	Pro	Pro	Val	Leu	Ser	Leu	Ala	Cys	Ser	Asp	Ile				
			180					185						190					
Thr	Val	Asn	Glu	Thr	Leu	Leu	Phe	Leu	Val	Ala	Thr	Leu	Asn	Glu	Ser				
			195				200						205						
Val	Thr	Ile	Met	Ile	Ile	Leu	Thr	Ser	Tyr	Leu	Leu	Ile	Leu	Thr	Thr				
			210				215						220						
Ile	Leu	Lys	Met	Gly	Ser	Ala	Glu	Gly	Arg	His	Lys	Ala	Phe	Ser	Thr				
			225			230					235				240				
Cys	Ala	Ser	His	Leu	Thr	Ala	Ile	Thr	Val	Phe	His	Gly	Thr	Val	Leu				
				245					250					255					
Ser	Ile	Tyr	Cys	Arg	Pro	Ser	Ser	Gly	Asn	Ser	Gly	Asp	Ala	Asp	Lys				
			260					265					270						
Val	Ala	Thr	Val	Phe	Tyr	Thr	Val	Val	Ile	Pro	Met	Leu	Asn	Ser	Val				
			275				280						285						
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Lys	Glu	Ala	Leu	Arg	Lys	Val				
			290			295					300								
Met	Gly	Ser	Lys	Ile	His	Ser													
			305			310													

<210> 45
 <211> 945

<212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (942)
 <223>

<400> 45
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 Met Met Ala Ser Glu Arg Asn Gln Ser Ser Thr Pro Thr Phe Ile Leu
 1 5 10 15

ttg ggt ttt tca gaa tac cca gaa atc cag gtt cca ctc ttt ctg gtt 96
 Leu Gly Phe Ser Glu Tyr Pro Glu Ile Gln Val Pro Leu Phe Leu Val
 20 25 30

ttc ttg ttc gtc tac aca gtc act gta gtg ggg aac ttg ggc atg ata 144
 Phe Leu Phe Val Tyr Thr Val Val Gly Asn Leu Gly Met Ile
 35 40 45

ata atc atc aga ctc aat tca aaa ctc cat aca atc atg tac ttt ttc 192
 Ile Ile Ile Arg Leu Asn Ser Lys Leu His Thr Ile Met Tyr Phe Phe
 50 55 60

ctt agt cac ttg tcc ttg aca gac ttc tgt ttt tcc act gta gtt aca 240
 Leu Ser His Leu Ser Leu Thr Asp Phe Cys Phe Ser Thr Val Val Thr
 65 70 75 80

cct aaa ctg ttg gag aac ttg gtt gtg gaa tac aga acc atc tct ttc 288
 Pro Lys Leu Leu Glu Asn Leu Val Val Glu Tyr Arg Thr Ile Ser Phe
 85 90 95

tct ggt tgc atc atg caa ttt tgt ttt gct tgc att ttt gga gtg aca 336
 Ser Gly Cys Ile Met Gln Phe Cys Phe Ala Cys Ile Phe Gly Val Thr
 100 105 110

gaa act ttc atg tta gca gcg atg gct tat gac cgt ttt gtg gca gtt 384
 Glu Thr Phe Met Leu Ala Ala Met Ala Tyr Asp Arg Phe Val Ala Val
 115 120 125

tgt aaa ccc ttg ctg tat acc act att atg tct cag aag ctc tgt gct 432
 Cys Lys Pro Leu Leu Tyr Thr Thr Ile Met Ser Gln Lys Leu Cys Ala
 130 135 140

ctt ctg gtg gct ggg tcc tat aca tgg ggg ata gtg tgc tcc ctg ata 480
 Leu Leu Val Ala Gly Ser Tyr Thr Trp Gly Ile Val Cys Ser Leu Ile
 145 150 155 160

ctc aca tat ttt ctt ctt gac tta tcg ttt tgt gaa tct acc ttc ata 528
 Leu Thr Tyr Phe Leu Leu Asp Leu Ser Phe Cys Glu Ser Thr Phe Ile
 165 170 175

aat aat ttt atc tgt gac cac tct gta att gtt tct gcc tcc tac tca 576
 Asn Asn Phe Ile Cys Asp His Ser Val Ile Val Ser Ala Ser Tyr Ser
 180 185 190

gac ccc tat atc agc cag agg cta tgc ttt att att gcc ata ttc aat 624
 Asp Pro Tyr Ile Ser Gln Arg Leu Cys Phe Ile Ile Ala Ile Phe Asn
 195 200 205

gag gtg agc agc cta att atc att ctg aca tca tat atg ctt att ttc 672
 Glu Val Ser Ser Leu Ile Ile Ile Leu Thr Ser Tyr Met Leu Ile Phe
 210 215 220
 act acc att atg aag atg cga tct gca agt ggg cgc cag aaa act ttc 720
 Thr Thr Ile Met Lys Met Arg Ser Ala Ser Gly Arg Gln Lys Thr Phe
 225 230 235 240
 tcc acc tgt gcc tcc cac ctg aca gcc atc act atc ttc cat gga act 768
 Ser Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr
 245 250 255
 atc ctt ttc ctt tac tgt gtt cct aat cct aaa act tct agc ctc ata 816
 Ile Leu Phe Leu Tyr Cys Val Pro Asn Pro Lys Thr Ser Ser Leu Ile
 260 265 270
 gtt aca gtg gct tct gtg ttt tac aca gtg gcg att cca atg ctg aac 864
 Val Thr Val Ala Ser Val Phe Tyr Thr Val Ala Ile Pro Met Leu Asn
 275 280 285
 cca ttg atc tac agc ctt agg aac aaa gat atc aat aac atg ttt gaa 912
 Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Ile Asn Asn Met Phe Glu
 290 295 300
 aaa tta gtt gtc acc aaa ttg att tac cac tga 945
 Lys Leu Val Val Thr Lys Leu Ile Tyr His
 305 310

<210> 46
 <211> 314
 <212> PRT
 <213> Homo Sapiens

<400> 46

Met Met Ala Ser Glu Arg Asn Gln Ser Ser Thr Pro Thr Phe Ile Leu
1 5 10 15

Leu Gly Phe Ser Glu Tyr Pro Glu Ile Gln Val Pro Leu Phe Leu Val
20 25 30

Phe Leu Phe Val Tyr Thr Val Thr Val Val Gly Asn Leu Gly Met Ile
35 40 45

Ile Ile Ile Arg Leu Asn Ser Lys Leu His Thr Ile Met Tyr Phe Phe
50 55 60

Leu Ser His Leu Ser Leu Thr Asp Phe Cys Phe Ser Thr Val Val Thr
65 70 75 80

Pro Lys Leu Leu Glu Asn Leu Val Val Glu Tyr Arg Thr Ile Ser Phe
85 90 95

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Ser Gly Cys Ile Met Gln Phe Cys Phe Ala Cys Ile Phe Gly Val Thr
 100 105 110

Glu Thr Phe Met Leu Ala Ala Met Ala Tyr Asp Arg Phe Val Ala Val
 115 120 125

Cys Lys Pro Leu Leu Tyr Thr Thr Ile Met Ser Gln Lys Leu Cys Ala
 130 135 140

Leu Leu Val Ala Gly Ser Tyr Thr Trp Gly Ile Val Cys Ser Leu Ile
 145 150 155 160

Leu Thr Tyr Phe Leu Leu Asp Leu Ser Phe Cys Glu Ser Thr Phe Ile
 165 170 175

Asn Asn Phe Ile Cys Asp His Ser Val Ile Val Ser Ala Ser Tyr Ser
 180 185 190

Asp Pro Tyr Ile Ser Gln Arg Leu Cys Phe Ile Ile Ala Ile Phe Asn
 195 200 205

Glu Val Ser Ser Leu Ile Ile Ile Leu Thr Ser Tyr Met Leu Ile Phe
 210 215 220

Thr Thr Ile Met Lys Met Arg Ser Ala Ser Gly Arg Gln Lys Thr Phe
 225 230 235 240

Ser Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr
 245 250 255

Ile Leu Phe Leu Tyr Cys Val Pro Asn Pro Lys Thr Ser Ser Leu Ile
 260 265 270

Val Thr Val Ala Ser Val Phe Tyr Thr Val Ala Ile Pro Met Leu Asn
 275 280 285

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Ile Asn Asn Met Phe Glu
 290 295 300

Lys Leu Val Val Thr Lys Leu Ile Tyr His
 305 310

<210> 47
 <211> 942
 <212> DNA
 <213> Homo Sapiens

<220>

<221> CDS

<222> (1) .. (939)

<223>

<400> 47

atg ctg ctg aca gat aga aat aca agt ggg acc acg ttc acc ctc ttg	48
Met Leu Leu Thr Asp Arg Asn Thr Ser Gly Thr Thr Phe Thr Leu Leu	
1 5 10 15	
ggc ttc tca gat tac cca gaa ctg caa gtc cca ctc ttc ctg gtt ttt	96
Gly Phe Ser Asp Tyr Pro Glu Leu Gln Val Pro Leu Phe Leu Val Phe	
20 25 30	
ctg gcc atc tac aat gtc act gtg cta ggg aat att ggg ttg att gtg	144
Leu Ala Ile Tyr Asn Val Thr Val Leu Gly Asn Ile Gly Leu Ile Val	
35 40 45	
atc atc aaa atc aac ccc aaa ctg cat acc ccc atg tac ttt ttc ctc	192
Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu	
50 55 60	
agc caa ctc tcc ttt gtg gat ttc tgc tat tcc tcc atc att gct ccc	240
Ser Gln Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro	
65 70 75 80	
aag atg ttg gtg aac ctt gtt gtc aaa gac aga acc att tca ttt tta	288
Lys Met Leu Val Asn Leu Val Val Lys Asp Arg Thr Ile Ser Phe Leu	
85 90 95	
gga tgc gta gta caa ttc ttt ttc ttc tgt acc ttt gtg gtc act gaa	336
Gly Cys Val Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr Glu	
100 105 110	
tcc ttt tta tta gct gtg atg gcc tat gac cgc ttc gtg gcc att tgc	384
Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys	
115 120 125	
aac cct ctg ctc tac aca gtt gac atg tcc cag aaa ctc tgc gtg ctg	432
Asn Pro Leu Leu Tyr Thr Val Asp Met Ser Gln Lys Leu Cys Val Leu	
130 135 140	
ctg gtt gtg gga tcc tat gcc tgg gga gtc tca tgt tcc ttg gaa ctg	480
Leu Val Val Gly Ser Tyr Ala Trp Gly Val Ser Cys Ser Leu Glu Leu	
145 150 155 160	
acg tgc tct gct tta aag tta tgt ttt cat ggt ttc aac aca atc aat	528
Thr Cys Ser Ala Leu Lys Leu Cys Phe His Gly Phe Asn Thr Ile Asn	
165 170 175	
cac ttc ttc tgt gag ttc tcc tca cta ctc tcc ctt tct tgc tct gat	576
His Phe Phe Cys Glu Phe Ser Ser Leu Leu Ser Leu Ser Cys Ser Asp	
180 185 190	
act tac atc aac cag tgg ctg cta ttc ttt ctt gcc acc ttt aat gaa	624
Thr Tyr Ile Asn Gln Trp Leu Leu Phe Phe Leu Ala Thr Phe Asn Glu	
195 200 205	
atc agc aca cta ctc atc gtt ctc aca tct tat gcg ttc att gtt gta	672
Ile Ser Thr Leu Leu Ile Val Leu Thr Ser Tyr Ala Phe Ile Val Val	

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210 215 220

acc atc ctc aag atg cgt tca gtc agt ggg cgc cgc aaa gcc ttc tcc 720
 Thr Ile Leu Lys Met Arg Ser Val Ser Gly Arg Arg Lys Ala Phe Ser
 225 230 235 240

acc tgt gcc tcc cac ctg act gcc atc acc atc ttc cat ggc acc atc 768
 Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr Ile
 245 250 255

ctc ttc ctt tac tgt gtg ccc aac tcc aaa aac tcc agg cac aca gtc 816
 Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr Val
 260 265 270

aaa gtg gcc tct gtg ttt tac acc gtg gtg atc ccc atg ttg aat ccc 864
 Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
 275 280 285

ctg atc tac agt ctg aga aat aaa gat gtc aag gat aca gtc acc gag 912
 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Thr Val Thr Glu
 290 295 300

ata ctg gac acc aaa gtc ttc tct tac tga 942
 Ile Leu Asp Thr Lys Val Phe Ser Tyr
 305 310

<210> 48
 <211> 313
 <212> PRT
 <213> Homo Sapiens

<400> 48

Met Leu Leu Thr Asp Arg Asn Thr Ser Gly Thr Thr Phe Thr Leu Leu
 1 5 10 15

Gly Phe Ser Asp Tyr Pro Glu Leu Gln Val Pro Leu Phe Leu Val Phe
 20 25 30

Leu Ala Ile Tyr Asn Val Thr Val Leu Gly Asn Ile Gly Leu Ile Val
 35 40 45

Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Ser Gln Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro
 65 70 75 80

Lys Met Leu Val Asn Leu Val Val Lys Asp Arg Thr Ile Ser Phe Leu
 85 90 95

Gly Cys Val Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr Glu
 100 105 110

Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys
 115 120 125

Asn Pro Leu Leu Tyr Thr Val Asp Met Ser Gln Lys Leu Cys Val Leu
 130 135 140

Leu Val Val Gly Ser Tyr Ala Trp Gly Val Ser Cys Ser Leu Glu Leu
 145 150 155 160

Thr Cys Ser Ala Leu Lys Leu Cys Phe His Gly Phe Asn Thr Ile Asn
 165 170 175

His Phe Phe Cys Glu Phe Ser Ser Leu Leu Ser Leu Ser Cys Ser Asp
 180 185 190

Thr Tyr Ile Asn Gln Trp Leu Leu Phe Phe Leu Ala Thr Phe Asn Glu
 195 200 205

Ile Ser Thr Leu Leu Ile Val Leu Thr Ser Tyr Ala Phe Ile Val Val
 210 215 220

Thr Ile Leu Lys Met Arg Ser Val Ser Gly Arg Arg Lys Ala Phe Ser
 225 230 235 240

Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr Ile
 245 250 255

Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr Val
 260 265 270

Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
 275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Thr Val Thr Glu
 290 295 300

Ile Leu Asp Thr Lys Val Phe Ser Tyr
 305 310

<210> 49
 <211> 951
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(948)

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<223>

<400> 49
 atg atc tgt gaa aat cac acc aga gtc act gaa ttt att ctt ctt ggt 48
 Met Ile Cys Glu Asn His Thr Arg Val Thr Glu Phe Ile Leu Leu Gly 15
 1 5 10

ttt aca aac aac ccc gag atg caa gtt tcc ctc ttt att ttt ttc ctg 96
 Phe Thr Asn Asn Pro Glu Met Gln Val Ser Leu Phe Ile Phe Phe Leu 30
 20 25

gcc att tat aca gtc act ttg ttg ggc aac ttt ctt att gtc aca gtt 144
 Ala Ile Tyr Thr Val Thr Leu Leu Gly Asn Phe Leu Ile Val Thr Val 45
 35 40

acc agt gtg gat ctc gca ctt caa aca ccc atg tac ttc ttt ctt caa 192
 Thr Ser Val Asp Leu Ala Leu Gln Thr Pro Met Tyr Phe Phe Leu Gln 60
 50 55

aat ctg tca ctt ctt gaa gta tgt ttc acc ttg gtt atg gtg cca aaa 240
 Asn Leu Ser Leu Leu Glu Val Cys Phe Thr Leu Val Met Val Pro Lys 80
 65 70 75

atg ctt gta gat cta gtg tcc cca agg aaa att atc tct ttt gtg ggc 288
 Met Leu Val Asp Leu Val Ser Pro Arg Lys Ile Ile Ser Phe Val Gly 95
 85 90

tgt ggt acc cag atg tac ttc ttc ttc ttc ttt ggc agt tct gaa tgt 336
 Cys Gly Thr Gln Met Tyr Phe Phe Phe Phe Gly Ser Ser Glu Cys 110
 100 105

ttc ctt ctc tcc atg atg gct tat gat cgc ttt gtg gcc atc tgt aac 384
 Phe Leu Leu Ser Met Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn 125
 115 120

cct ctc cat tat tca gtc ata atg aac agg tcc cta tgc ttg tgg atg 432
 Pro Leu His Tyr Ser Val Ile Met Asn Arg Ser Leu Cys Leu Trp Met 140
 130 135

gcc ata ggc tct tgg atg tcc ggt gtt cct gtg tct atg cta cag aca 480
 Ala Ile Gly Ser Trp Met Ser Gly Val Pro Val Ser Met Leu Gln Thr 160
 145 150 155

gct tgg atg atg gcc ctt cct ttc tgt gga cca aat gcc gtg gac cac 528
 Ala Trp Met Met Ala Leu Pro Phe Cys Gly Pro Asn Ala Val Asp His 175
 165 170

ttt ttc tgt gat ggt ccc cca gtg tta aaa cta gtc aca gtg gat aca 576
 Phe Phe Cys Asp Gly Pro Pro Val Leu Lys Leu Val Thr Val Asp Thr 190
 180 185

acc atg tat gaa atg caa gca ctt gcc tcc aca ctc ctg ttt atc atg 624
 Thr Met Tyr Glu Met Gln Ala Leu Ala Ser Thr Leu Leu Phe Ile Met 205
 195 200

ttt ccc ttt tgt ctc att ttg gtt tcc tac acc cgc att atc ata aca 672
 Phe Pro Phe Cys Leu Ile Leu Val Ser Tyr Thr Arg Ile Ile Ile Thr 220
 210 215

att ctg agg atg tcc tct gcc act ggc cgc cag aag gca ttt tct act 720

Ile Leu Arg Met Ser Ser Ala Thr Gly Arg Gln Lys Ala Phe Ser Thr
 225 230 235 240

tgt tcc tca cac ctc att gtg gtg tcc ctc ttc tac gga aca gcc agt 768
 Cys Ser Ser His Leu Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ser
 245 250 255

ctg acc tac ctg cgg ccc aaa tca aac cag tcc cct gag agc aag aag 816
 Leu Thr Tyr Leu Arg Pro Lys Ser Asn Gln Ser Pro Glu Ser Lys Lys
 260 265 270

cta gtg tca ttg tcc tac act gtc atc aca cct atg cta aac ccc atc 864
 Leu Val Ser Leu Ser Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Ile
 275 280 285

atc tac ggc ctg agg aac aat gaa gtg aaa ggg gct gtc aag agg aca 912
 Ile Tyr Gly Leu Arg Asn Asn Glu Val Lys Gly Ala Val Lys Arg Thr
 290 295 300

atc act caa aaa gtc tta cag aag tta gat gtg ttt tga 951
 Ile Thr Gln Lys Val Leu Gln Lys Leu Asp Val Phe
 305 310 315

<210> 50
 <211> 316
 <212> PRT
 <213> Homo Sapiens

<400> 50

Met Ile Cys Glu Asn His Thr Arg Val Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15

Phe Thr Asn Asn Pro Glu Met Gln Val Ser Leu Phe Ile Phe Phe Leu
 20 25 30

Ala Ile Tyr Thr Val Thr Leu Leu Gly Asn Phe Leu Ile Val Thr Val
 35 40 45

Thr Ser Val Asp Leu Ala Leu Gln Thr Pro Met Tyr Phe Phe Leu Gln
 50 55 60

Asn Leu Ser Leu Leu Glu Val Cys Phe Thr Leu Val Met Val Pro Lys
 65 70 75 80

Met Leu Val Asp Leu Val Ser Pro Arg Lys Ile Ile Ser Phe Val Gly
 85 90 95

Cys Gly Thr Gln Met Tyr Phe Phe Phe Phe Gly Ser Ser Glu Cys
 100 105 110

Phe Leu Leu Ser Met Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn
 115 120 125

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Pro Leu His Tyr Ser Val Ile Met Asn Arg Ser Leu Cys Leu Trp Met
 130 135 140

Ala Ile Gly Ser Trp Met Ser Gly Val Pro Val Ser Met Leu Gln Thr
 145 150 155 160

Ala Trp Met Met Ala Leu Pro Phe Cys Gly Pro Asn Ala Val Asp His
 165 170 175

Phe Phe Cys Asp Gly Pro Pro Val Leu Lys Leu Val Thr Val Asp Thr
 180 185 190

Thr Met Tyr Glu Met Gln Ala Leu Ala Ser Thr Leu Leu Phe Ile Met
 195 200 205

Phe Pro Phe Cys Leu Ile Leu Val Ser Tyr Thr Arg Ile Ile Ile Thr
 210 215 220

Ile Leu Arg Met Ser Ser Ala Thr Gly Arg Gln Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ser Ser His Leu Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ser
 245 250 255

Leu Thr Tyr Leu Arg Pro Lys Ser Asn Gln Ser Pro Glu Ser Lys Lys
 260 265 270

Leu Val Ser Leu Ser Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Ile
 275 280 285

Ile Tyr Gly Leu Arg Asn Asn Glu Val Lys Gly Ala Val Lys Arg Thr
 290 295 300

Ile Thr Gln Lys Val Leu Gln Lys Leu Asp Val Phe
 305 310 315

<210> 51
 <211> 942
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (939)
 <223>

<400>	51															
atg ggt gac agg gga aca agc aat cac tca gaa atg act gac ttc att																48
Met Gly Asp Arg Gly Thr Ser Asn His Ser Glu Met Thr Asp Phe Ile																
1	5				10					15						
ctt gca ggc ttc agg gta cgc cca gag ctg cac att ctg ctg ttc ctg																96
Leu Ala Gly Phe Arg Val Arg Pro Glu Leu His Ile Leu Leu Phe Leu																
	20				25					30						
cta ttt ttg ttt gtt tat gcc atg atc ctt cta ggg aat gtt ggg atg																144
Leu Phe Leu Phe Val Tyr Ala Met Ile Leu Leu Gly Asn Val Gly Met																
	35				40					45						
atg acc att att atg act gat cct cgg ctg aac aca cca atg tat ttt																192
Met Thr Ile Ile Met Thr Asp Pro Arg Leu Asn Thr Pro Met Tyr Phe																
	50				55					60						
ttc cta ggc aat ctg tcc ttc att gat ctt ttc tat tca tct gtt att																240
Phe Leu Gly Asn Leu Ser Phe Ile Asp Leu Phe Tyr Ser Ser Val Ile																
65	70				75					80						
gaa ccc aag gct atg atc aac ttc tgg tct gaa aac aag tct atc tcc																288
Glu Pro Lys Ala Met Ile Asn Phe Trp Ser Glu Asn Lys Ser Ile Ser																
	85				90					95						
ttt gca ggc tgt gtg gcc cag ctg ttt ctg ttt gcc ctg ctg att gtg																336
Phe Ala Gly Cys Val Ala Gln Leu Phe Leu Phe Ala Leu Leu Ile Val																
	100				105					110						
act gag gga ttt ctg ctg gcg gcc atg gct tat gac cgc ttt att gcc																384
Thr Glu Gly Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Phe Ile Ala																
	115				120					125						
atc tgc aac cct ctg ctg tac tct gtt caa atg tcc aca cgt ctg tgt																432
Ile Cys Asn Pro Leu Leu Tyr Ser Val Gln Met Ser Thr Arg Leu Cys																
	130				135					140						
act cag ttg gtg gct ggt tcc tat ttt tgt ggc tgc att agc tca gtt																480
Thr Gln Leu Val Ala Gly Ser Tyr Phe Cys Gly Cys Ile Ser Ser Val																
145	150				155					160						
att cag act agc atg aca ttt act tta tct ttt tgc gct tct cgg gct																528
Ile Gln Thr Ser Met Thr Phe Thr Leu Ser Phe Cys Ala Ser Arg Ala																
	165				170					175						
gtt gac cac ttt tac tgt gat tct cgc cca ctt cag aga ctg tct tgt																576
Val Asp His Phe Tyr Cys Asp Ser Arg Pro Leu Gln Arg Leu Ser Cys																
	180				185					190						
tct gat ctg ttt atc cat aga atg ata tct ttt tcc tta tca tgt att																624
Ser Asp Leu Phe Ile His Arg Met Ile Ser Phe Ser Leu Ser Cys Ile																
	195				200					205						
att atc ttg cct act atc ata gtc att ata gta tct tac atg tat att																672
Ile Ile Leu Pro Thr Ile Ile Val Ile Val Val Ser Tyr Met Tyr Ile																
	210				215					220						
gtg tcc aca gtt cta aag ata cat tct act gag gga cat aag aag gcc																720
Val Ser Thr Val Leu Lys Ile His Ser Thr Glu Gly His Lys Lys Ala																
225	230				235					240						

ttc tcc acc tgc agc tct cac ctg gga gtt gtg agt gtg ctg tat ggt 768
 Phe Ser Thr Cys Ser Ser His Leu Gly Val Val Ser Val Leu Tyr Gly
 245 250 255
 gct gtc ttt ttt atg tat ctc act cct gac aga ttt cct gag ctg agt 816
 Ala Val Phe Phe Met Tyr Leu Thr Pro Asp Arg Phe Pro Glu Leu Ser
 260 265 270
 aaa gtg gca tcc tta tgt tac tcc cta gtc act ccc atg ttg aat cct 864
 Lys Val Ala Ser Leu Cys Tyr Ser Leu Val Thr Pro Met Leu Asn Pro
 275 280 285
 ttg att tac tct ctg agg aac aaa gat gtc caa gag gct cta aaa aaa 912
 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Gln Glu Ala Leu Lys Lys
 290 295 300
 ttt cta gag aag aaa aat att att ctt tga 942
 Phe Leu Glu Lys Lys Asn Ile Ile Leu
 305 310

<210> 52
 <211> 313
 <212> PRT
 <213> Homo Sapiens

<400> 52

Met Gly Asp Arg Gly Thr Ser Asn His Ser Glu Met Thr Asp Phe Ile
 1 5 10 15

Leu Ala Gly Phe Arg Val Arg Pro Glu Leu His Ile Leu Leu Phe Leu
 20 25 30

Leu Phe Leu Phe Val Tyr Ala Met Ile Leu Leu Gly Asn Val Gly Met
 35 40 45

Met Thr Ile Ile Met Thr Asp Pro Arg Leu Asn Thr Pro Met Tyr Phe
 50 55 60

Phe Leu Gly Asn Leu Ser Phe Ile Asp Leu Phe Tyr Ser Ser Val Ile
 65 70 75 80

Glu Pro Lys Ala Met Ile Asn Phe Trp Ser Glu Asn Lys Ser Ile Ser
 85 90 95

Phe Ala Gly Cys Val Ala Gln Leu Phe Leu Phe Ala Leu Leu Ile Val
 100 105 110

Thr Glu Gly Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Phe Ile Ala
 115 120 125

Ile Cys Asn Pro Leu Leu Tyr Ser Val Gln Met Ser Thr Arg Leu Cys

130 135 140
 Thr Gln Leu Val Ala Gly Ser Tyr Phe Cys Gly Cys Ile Ser Ser Val
 145 150 155 160
 Ile Gln Thr Ser Met Thr Phe Thr Leu Ser Phe Cys Ala Ser Arg Ala
 165 170 175
 Val Asp His Phe Tyr Cys Asp Ser Arg Pro Leu Gln Arg Leu Ser Cys
 180 185 190
 Ser Asp Leu Phe Ile His Arg Met Ile Ser Phe Ser Leu Ser Cys Ile
 195 200 205
 Ile Ile Leu Pro Thr Ile Ile Val Ile Ile Val Ser Tyr Met Tyr Ile
 210 215 220
 Val Ser Thr Val Leu Lys Ile His Ser Thr Glu Gly His Lys Lys Ala
 225 230 235 240
 Phe Ser Thr Cys Ser Ser His Leu Gly Val Val Ser Val Leu Tyr Gly
 245 250 255
 Ala Val Phe Phe Met Tyr Leu Thr Pro Asp Arg Phe Pro Glu Leu Ser
 260 265 270
 Lys Val Ala Ser Leu Cys Tyr Ser Leu Val Thr Pro Met Leu Asn Pro
 275 280 285
 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Gln Glu Ala Leu Lys Lys
 290 295 300
 Phe Leu Glu Lys Lys Asn Ile Ile Leu
 305 310

<210> 53
 <211> 957
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(954)
 <223>

<400> 53
 atg aag aat gtc act gaa gtt acc tta ttt gta ctg aag ggc ttc aca
 Met Lys Asn Val Thr Glu Val Thr Leu Phe Val Leu Lys Gly Phe Thr

1	5	10	15	
gac aat ctt gaa ctg cag act atc ttc ttc ttc ctg ttt cta gca atc				96
Asp Asn Leu Glu Leu Gln Thr Ile Phe Phe Phe Leu Phe Leu Ala Ile				
20		25	30	
tac ctc ttc act ctc atg gga aat tta gga ctg att tta gtg gtc att				144
Tyr Leu Phe Thr Leu Met Gly Asn Leu Gly Leu Ile Leu Val Val Ile				
35		40	45	
agg gat tcc cag ctc cac aaa ccc atg tac tat ttt ctg agt atg ttg				192
Arg Asp Ser Gln Leu His Lys Pro Met Tyr Tyr Phe Leu Ser Met Leu				
50		55	60	
tct tct gtg gat gcc tgc tat tcc tca gtt att acc cca aat atg tta				240
Ser Ser Val Asp Ala Cys Tyr Ser Ser Val Ile Thr Pro Asn Met Leu				
65		70	75	80
gta gat ttt acg aca aag aat aaa gtc att tca ttc ctt gga tgt gta				288
Val Asp Phe Thr Thr Lys Asn Lys Val Ile Ser Phe Leu Gly Cys Val				
85		90	95	
gca cag gtg ttt ctt gct tgt agt ttt gga acc aca gaa tgc ttt ctc				336
Ala Gln Val Phe Leu Ala Cys Ser Phe Gly Thr Thr Glu Cys Phe Leu				
100		105	110	
ttg gct gca atg gct tat gat cgc tat gta gcc atc tac aac cct ctc				384
Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Tyr Asn Pro Leu				
115		120	125	
ctg tat tca gtg agc atg tca ccc aga gtc tac atg cca ctc atc aat				432
Leu Tyr Ser Val Ser Met Ser Pro Arg Val Tyr Met Pro Leu Ile Asn				
130		135	140	
gct tcc tat gtt gct ggc att tta cat gct act ata cat aca gtg gct				480
Ala Ser Tyr Val Ala Gly Ile Leu His Ala Thr Ile His Thr Val Ala				
145		150	155	160
aca ttt agc cta tcc ttc tgt gga gcc aat gaa att agg cgt gtc ttt				528
Thr Phe Ser Leu Ser Phe Cys Gly Ala Asn Glu Ile Arg Arg Val Phe				
165		170	175	
tgt gat atc cct cct ctc ctt gct att tct tat tct gac act cac aca				576
Cys Asp Ile Pro Pro Leu Leu Ala Ile Ser Tyr Ser Asp Thr His Thr				
180		185	190	
aac cag ctt cta ctc ttc tac ttt gtg ggc tct atc gag ctg gtc act				624
Asn Gln Leu Leu Leu Phe Tyr Phe Val Gly Ser Ile Glu Leu Val Thr				
195		200	205	
atc ctg att gtt ctg atc tcc tat ggt ttg att ctg ttg gcc att ctg				672
Ile Leu Ile Val Leu Ile Ser Tyr Gly Leu Ile Leu Leu Ala Ile Leu				
210		215	220	
aag atg tat tct gct gaa ggg agg aga aaa gtc ttc tcc aca tgt gga				720
Lys Met Tyr Ser Ala Glu Gly Arg Arg Lys Val Phe Ser Thr Cys Gly				
225		230	235	240
gct cac cta act gga gtg tca att tat tat ggg aca atc ctc ttc atg				768
Ala His Leu Thr Gly Val Ser Ile Tyr Tyr Gly Thr Ile Leu Phe Met				
245		250	255	

tat gtg aga cca agt tcc agc tat gct tgc gac cat gac atg ata gtg 816
 Tyr Val Arg Pro Ser Ser Ser Tyr Ala Ser Asp His Asp Met Ile Val
 260 265 270

tca ata ttt tac acc att gtg att ccc ttg ctg aat ccc gtc atc tac 864
 Ser Ile Phe Tyr Thr Ile Val Ile Pro Leu Leu Asn Pro Val Ile Tyr
 275 280 285

agt ttg agg aac aaa gat gta aaa gac tca atg aaa aaa atg ttt ggg 912
 Ser Leu Arg Asn Lys Asp Val Lys Asp Ser Met Lys Lys Met Phe Gly
 290 295 300

aaa aat cag gtt atc aat aaa gta tat ttt cat act aaa aaa taa 957
 Lys Asn Gln Val Ile Asn Lys Val Tyr Phe His Thr Lys Lys
 305 310 315

<210> 54

<211> 318

<212> PRT

<213> Homo Sapiens

<400> 54

Met Lys Asn Val Thr Glu Val Thr Leu Phe Val Leu Lys Gly Phe Thr
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Asp Asn Leu Glu Leu Gln Thr Ile Phe Phe Phe Leu Phe Leu Ala Ile
 20 25 30

Tyr Leu Phe Thr Leu Met Gly Asn Leu Gly Leu Ile Leu Val Val Ile
 35 40 45

Arg Asp Ser Gln Leu His Lys Pro Met Tyr Tyr Phe Leu Ser Met Leu
 50 55 60

Ser Ser Val Asp Ala Cys Tyr Ser Ser Val Ile Thr Pro Asn Met Leu
 65 70 75 80

Val Asp Phe Thr Thr Lys Asn Lys Val Ile Ser Phe Leu Gly Cys Val
 85 90 95

Ala Gln Val Phe Leu Ala Cys Ser Phe Gly Thr Thr Glu Cys Phe Leu
 100 105 110

Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Tyr Asn Pro Leu
 115 120 125

Leu Tyr Ser Val Ser Met Ser Pro Arg Val Tyr Met Pro Leu Ile Asn
 130 135 140

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Ala Ser Tyr Val Ala Gly Ile Leu His Ala Thr Ile His Thr Val Ala
 145 150 155 160

Thr Phe Ser Leu Ser Phe Cys Gly Ala Asn Glu Ile Arg Arg Val Phe
 165 170 175

Cys Asp Ile Pro Pro Leu Leu Ala Ile Ser Tyr Ser Asp Thr His Thr
 180 185 190

Asn Gln Leu Leu Leu Phe Tyr Phe Val Gly Ser Ile Glu Leu Val Thr
 195 200 205

Ile Leu Ile Val Leu Ile Ser Tyr Gly Leu Ile Leu Leu Ala Ile Leu
 210 215 220

Lys Met Tyr Ser Ala Glu Gly Arg Arg Lys Val Phe Ser Thr Cys Gly
 225 230 235 240

Ala His Leu Thr Gly Val Ser Ile Tyr Tyr Gly Thr Ile Leu Phe Met
 245 250 255

Tyr Val Arg Pro Ser Ser Ser Tyr Ala Ser Asp His Asp Met Ile Val
 260 265 270

Ser Ile Phe Tyr Thr Ile Val Ile Pro Leu Leu Asn Pro Val Ile Tyr
 275 280 285

Ser Leu Arg Asn Lys Asp Val Lys Asp Ser Met Lys Lys Met Phe Gly
 290 295 300

Lys Asn Gln Val Ile Asn Lys Val Tyr Phe His Thr Lys Lys
 305 310 315

<210> 55
 <211> 969
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(966)
 <223>

<400> 55
 atg gac aag ttg tca tca ggt ttg gat ata tac agg aat cca ctg aag
 Met Asp Lys Leu Ser Ser Gly Leu Asp Ile Tyr Arg Asn Pro Leu Lys
 1 5 10 15

aac aag act gaa gtc acc atg ttt ata ttg aca ggc ttc aca gat gat

48

96

Asn	Lys	Thr	Glu	Val	Thr	Met	Phe	Ile	Leu	Thr	Gly	Phe	Thr	Asp	Asp	
			20					25					30			
ttt	gag	ctg	caa	gtc	ttc	cta	ttt	tta	cta	ttt	ttt	gca	atc	tat	ctc	144
Phe	Glu	Leu	Gln	Val	Phe	Leu	Phe	Leu	Leu	Phe	Phe	Ala	Ile	Tyr	Leu	
		35					40					45				
ttt	acc	ttg	ata	ggc	aat	tta	ggg	ctg	gtt	gtg	ttg	gtc	att	gag	gat	192
Phe	Thr	Leu	Ile	Gly	Asn	Leu	Gly	Leu	Val	Val	Leu	Val	Ile	Glu	Asp	
	50					55					60					
tcc	tgg	ctc	cac	aac	ccc	atg	tat	tat	ttt	ctt	agt	gtt	tta	tca	ttc	240
Ser	Trp	Leu	His	Asn	Pro	Met	Tyr	Tyr	Phe	Leu	Ser	Val	Leu	Ser	Phe	
65					70					75					80	
ttg	gat	gct	tgc	tat	tct	aca	gtt	gtc	act	cca	aaa	atg	ttg	gtc	aat	288
Leu	Asp	Ala	Cys	Tyr	Ser	Thr	Val	Val	Thr	Pro	Lys	Met	Leu	Val	Asn	
			85						90					95		
ttc	ctg	gca	aaa	aat	aaa	tcc	att	tca	ttt	atc	gga	tgt	gca	aca	cag	336
Phe	Leu	Ala	Lys	Asn	Lys	Ser	Ile	Ser	Phe	Ile	Gly	Cys	Ala	Thr	Gln	
			100					105					110			
atg	ctt	ctt	ttt	gtt	act	ttt	gga	act	aca	gaa	tgt	ttt	ctc	ttg	gct	384
Met	Leu	Leu	Phe	Val	Thr	Phe	Gly	Thr	Thr	Glu	Cys	Phe	Leu	Leu	Ala	
			115				120						125			
gca	atg	gct	tat	gat	cac	tat	gta	gcc	atc	tac	aac	cct	ctc	ctg	tat	432
Ala	Met	Ala	Tyr	Asp	His	Tyr	Val	Ala	Ile	Tyr	Asn	Pro	Leu	Leu	Tyr	
	130					135					140					
tca	gtg	agc	atg	tca	ccc	aga	gtc	tat	gtg	cca	ctc	atc	act	gct	tcc	480
Ser	Val	Ser	Met	Ser	Pro	Arg	Val	Tyr	Val	Pro	Leu	Ile	Thr	Ala	Ser	
145					150					155					160	
tac	gtt	gct	ggc	att	tta	cat	gct	act	ata	cat	ata	gtg	gct	aca	ttt	528
Tyr	Val	Ala	Gly	Ile	Leu	His	Ala	Thr	Ile	His	Ile	Val	Ala	Thr	Phe	
				165					170					175		
agc	ctg	tcc	ttc	tgt	gga	tcc	aat	gaa	att	agg	cat	gtc	ttt	tgt	gat	576
Ser	Leu	Ser	Phe	Cys	Gly	Ser	Asn	Glu	Ile	Arg	His	Val	Phe	Cys	Asp	
			180					185					190			
atg	cct	cct	ctc	ctt	gct	att	tct	tgt	tct	gac	act	cac	aca	aac	cag	624
Met	Pro	Pro	Leu	Leu	Ala	Ile	Ser	Cys	Ser	Asp	Thr	His	Thr	Asn	Gln	
		195					200					205				
ctt	cta	ctc	ttc	tac	ttt	gtg	ggg	tct	att	gag	ata	gtc	act	atc	ctg	672
Leu	Leu	Leu	Phe	Tyr	Phe	Val	Gly	Ser	Ile	Glu	Ile	Val	Thr	Ile	Leu	
			210				215					220				
att	gtc	ctc	att	tcc	tgt	gat	ttc	att	ctg	ttg	tcc	att	ctg	aag	atg	720
Ile	Val	Leu	Ile	Ser	Cys	Asp	Phe	Ile	Leu	Leu	Ser	Ile	Leu	Lys	Met	
225					230					235					240	
cat	tct	gct	aag	gga	agg	caa	aag	gcc	ttc	tct	aca	tgt	ggc	tct	cac	768
His	Ser	Ala	Lys	Gly	Arg	Gln	Lys	Ala	Phe	Ser	Thr	Cys	Gly	Ser	His	
				245					250					255		
cta	act	gga	gtg	aca	att	tat	cat	gga	aca	att	ctc	gtc	agt	tat	atg	816
Leu	Thr	Gly	Val	Thr	Ile	Tyr	His	Gly	Thr	Ile	Leu	Val	Ser	Tyr	Met	

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260 265 270

aga cca agt tcc agc tat gct tca gac cat gac atc ata gtg tca ata 864
 Arg Pro Ser Ser Ser Tyr Ala Ser Asp His Asp Ile Ile Val Ser Ile
 275 280 285

ttt tac aca att gtg att ccc aag ttg aat ccc atc atc tat agt ttg 912
 Phe Tyr Thr Ile Val Ile Pro Lys Leu Asn Pro Ile Ile Tyr Ser Leu
 290 295 300

agg aac aaa gaa gta aaa aag gca gtg aag aaa atg ttg aaa ttg gtt 960
 Arg Asn Lys Glu Val Lys Lys Ala Val Lys Lys Met Leu Lys Leu Val
 305 310 315 320

tac aaa tga 969
 Tyr Lys

<210> 56
 <211> 322
 <212> PRT
 <213> Homo Sapiens

<400> 56

Met Asp Lys Leu Ser Ser Gly Leu Asp Ile Tyr Arg Asn Pro Leu Lys
 1 5 10 15

Asn Lys Thr Glu Val Thr Met Phe Ile Leu Thr Gly Phe Thr Asp Asp
 20 25 30

Phe Glu Leu Gln Val Phe Leu Phe Leu Leu Phe Phe Ala Ile Tyr Leu
 35 40 45

Phe Thr Leu Ile Gly Asn Leu Gly Leu Val Val Leu Val Ile Glu Asp
 50 55 60

Ser Trp Leu His Asn Pro Met Tyr Tyr Phe Leu Ser Val Leu Ser Phe
 65 70 75 80

Leu Asp Ala Cys Tyr Ser Thr Val Val Thr Pro Lys Met Leu Val Asn
 85 90 95

Phe Leu Ala Lys Asn Lys Ser Ile Ser Phe Ile Gly Cys Ala Thr Gln
 100 105 110

Met Leu Leu Phe Val Thr Phe Gly Thr Thr Glu Cys Phe Leu Leu Ala
 115 120 125

Ala Met Ala Tyr Asp His Tyr Val Ala Ile Tyr Asn Pro Leu Leu Tyr
 130 135 140

Ser Val Ser Met Ser Pro Arg Val Tyr Val Pro Leu Ile Thr Ala Ser
145 150 155 160

Tyr Val Ala Gly Ile Leu His Ala Thr Ile His Ile Val Ala Thr Phe
165 170 175

Ser Leu Ser Phe Cys Gly Ser Asn Glu Ile Arg His Val Phe Cys Asp
180 185 190

Met Pro Pro Leu Leu Ala Ile Ser Cys Ser Asp Thr His Thr Asn Gln
195 200 205

Leu Leu Leu Phe Tyr Phe Val Gly Ser Ile Glu Ile Val Thr Ile Leu
210 215 220

Ile Val Leu Ile Ser Cys Asp Phe Ile Leu Leu Ser Ile Leu Lys Met
225 230 235 240

His Ser Ala Lys Gly Arg Gln Lys Ala Phe Ser Thr Cys Gly Ser His
245 250 255

Leu Thr Gly Val Thr Ile Tyr His Gly Thr Ile Leu Val Ser Tyr Met
260 265 270

Arg Pro Ser Ser Ser Tyr Ala Ser Asp His Asp Ile Ile Val Ser Ile
275 280 285

Phe Tyr Thr Ile Val Ile Pro Lys Leu Asn Pro Ile Ile Tyr Ser Leu
290 295 300

Arg Asn Lys Glu Val Lys Lys Ala Val Lys Lys Met Leu Lys Leu Val
305 310 315 320

Tyr Lys

<210> 57
<211> 960
<212> DNA
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<222> (1) .. (957)
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<400> 57

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 Met Asn His Val Val Lys His Asn His Thr Ala Val Thr Lys Val Thr 15
 1 5 10

gaa ttt att ctc atg ggg att aca gac aac cct ggg ctg cag gct cca 96
 Glu Phe Ile Leu Met Gly Ile Thr Asp Asn Pro Gly Leu Gln Ala Pro 30
 20 25

ctg ttt gga ctc ttc ctc atc ata tat ctg gtc aca gtg ata ggc aat 144
 Leu Phe Gly Leu Phe Leu Ile Ile Tyr Leu Val Thr Val Ile Gly Asn 45
 35 40

ctg ggc atg gtt atc ttg acc tac ttg gac tcc aag cta cac acc ccc 192
 Leu Gly Met Val Ile Leu Thr Tyr Leu Asp Ser Lys Leu His Thr Pro 60
 50 55

atg tac ttt ttc ctt aga cat ttg tca atc act gat ctt ggt tac tcc 240
 Met Tyr Phe Phe Leu Arg His Leu Ser Ile Thr Asp Leu Gly Tyr Ser 80
 65 70 75

act gtc att gcc ccg aag atg tta gta aac ttc ata gtg cac aaa aac 288
 Thr Val Ile Ala Pro Lys Met Leu Val Asn Phe Ile Val His Lys Asn 95
 85 90

aca att tct tac aat tgg tat gcc act cag cta gca ttc ttt gag att 336
 Thr Ile Ser Tyr Asn Trp Tyr Ala Thr Gln Leu Ala Phe Phe Glu Ile 110
 100 105

ttc atc atc tct gag ctc ttt att cta tca gca atg gcc tat gat cgc 384
 Phe Ile Ile Ser Glu Leu Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg 125
 115 120

tac gta gcc atc tgt aaa cct ctt ctg tac gtg atc atc atg gca gag 432
 Tyr Val Ala Ile Cys Lys Pro Leu Leu Tyr Val Ile Ile Met Ala Glu 140
 130 135

aaa gta ctt tgg gtg ctg gta att gtt ccc tat ctc tat agc acg ttt 480
 Lys Val Leu Trp Val Leu Val Ile Val Pro Tyr Leu Tyr Ser Thr Phe 160
 145 150 155

gtg tca cta ttt ctc aca att aag tta ttt aaa ctg tcc ttc tgt ggc 528
 Val Ser Leu Phe Leu Thr Ile Lys Leu Phe Lys Leu Ser Phe Cys Gly 175
 165 170

tca aac ata atc agc tat ttt tac tgt gac tgt atc cct ctg atg tcc 576
 Ser Asn Ile Ile Ser Tyr Phe Tyr Cys Asp Cys Ile Pro Leu Met Ser 190
 180 185

ata ctc tgt tct gac aca aat gaa tta gaa tta ata att ttg atc ttc 624
 Ile Leu Cys Ser Asp Thr Asn Glu Leu Glu Leu Ile Ile Leu Ile Phe 205
 195 200

tca ggc tgt aat ttg ctc ttc tcc ctc tca att gtt ctc ata tcc tac 672
 Ser Gly Cys Asn Leu Leu Phe Ser Leu Ser Ile Val Leu Ile Ser Tyr 220
 210 215

atg ttt att cta gtg gcc att ctc aga atg aac tca agg aaa ggg agg 720
 Met Phe Ile Leu Val Ala Ile Leu Arg Met Asn Ser Arg Lys Gly Arg 240
 225 230 235

tac aaa gcc ttc tcc acc tgt agc tct cat ctg aca gtg gtg atc atg 768

Tyr Lys Ala Phe Ser Thr Cys Ser Ser His Leu Thr Val Val Ile Met
 245 250 255
 ttc tat ggg aca ttg tta ttt att tac ttg caa ccc aag tcc agt cat 816
 Phe Tyr Gly Thr Leu Leu Phe Ile Tyr Leu Gln Pro Lys Ser Ser His
 260 265 270
 act ttg gct att gat aaa atg gcc tca gtg ttt tat acc ctg ttg att 864
 Thr Leu Ala Ile Asp Lys Met Ala Ser Val Phe Tyr Thr Leu Leu Ile
 275 280 285
 cct atg ctg aat ccg ttg atc tac agc cta agg aac aaa gaa gta aaa 912
 Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
 290 295 300
 gat gct cta aag aga act tta acc aat cga ttc aaa att ccc att taa 960
 Asp Ala Leu Lys Arg Thr Leu Thr Asn Arg Phe Lys Ile Pro Ile
 305 310 315

<210> 58
 <211> 319
 <212> PRT
 <213> Homo Sapiens

<400> 58

Met Asn His Val Val Lys His Asn His Thr Ala Val Thr Lys Val Thr
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Glu Phe Ile Leu Met Gly Ile Thr Asp Asn Pro Gly Leu Gln Ala Pro
 20 25 30

Leu Phe Gly Leu Phe Leu Ile Ile Tyr Leu Val Thr Val Ile Gly Asn
 35 40 45

Leu Gly Met Val Ile Leu Thr Tyr Leu Asp Ser Lys Leu His Thr Pro
 50 55 60

Met Tyr Phe Phe Leu Arg His Leu Ser Ile Thr Asp Leu Gly Tyr Ser
 65 70 75 80

Thr Val Ile Ala Pro Lys Met Leu Val Asn Phe Ile Val His Lys Asn
 85 90 95

Thr Ile Ser Tyr Asn Trp Tyr Ala Thr Gln Leu Ala Phe Phe Glu Ile
 100 105 110

Phe Ile Ile Ser Glu Leu Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg
 115 120 125

Tyr Val Ala Ile Cys Lys Pro Leu Leu Tyr Val Ile Ile Met Ala Glu
 130 135 140

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Lys Val Leu Trp Val Leu Val Ile Val Pro Tyr Leu Tyr Ser Thr Phe
 145 150 155 160

Val Ser Leu Phe Leu Thr Ile Lys Leu Phe Lys Leu Ser Phe Cys Gly
 165 170 175

Ser Asn Ile Ile Ser Tyr Phe Tyr Cys Asp Cys Ile Pro Leu Met Ser
 180 185 190

Ile Leu Cys Ser Asp Thr Asn Glu Leu Glu Leu Ile Ile Leu Ile Phe
 195 200 205

Ser Gly Cys Asn Leu Leu Phe Ser Leu Ser Ile Val Leu Ile Ser Tyr
 210 215 220

Met Phe Ile Leu Val Ala Ile Leu Arg Met Asn Ser Arg Lys Gly Arg
 225 230 235 240

Tyr Lys Ala Phe Ser Thr Cys Ser Ser His Leu Thr Val Val Ile Met
 245 250 255

Phe Tyr Gly Thr Leu Leu Phe Ile Tyr Leu Gln Pro Lys Ser Ser His
 260 265 270

Thr Leu Ala Ile Asp Lys Met Ala Ser Val Phe Tyr Thr Leu Leu Ile
 275 280 285

Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
 290 295 300

Asp Ala Leu Lys Arg Thr Leu Thr Asn Arg Phe Lys Ile Pro Ile
 305 310 315

<210> 59
 <211> 939
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(936)
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<400> 59
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 1 5 10 15

atc	aca	gat	atc	gct	gag	ctg	cag	gca	cca	tta	ttt	gca	ttg	ttc	ctc	96
Ile	Thr	Asp	Ile	Ala	Glu	Leu	Gln	Ala	Pro	Leu	Phe	Ala	Leu	Phe	Leu	
			20					25					30			
atg	atc	tat	gtg	atc	tca	gtg	atg	ggc	aat	ttg	ggc	atg	att	gtc	ctc	144
Met	Ile	Tyr	Val	Ile	Ser	Val	Met	Gly	Asn	Leu	Gly	Met	Ile	Val	Leu	
		35					40					45				
acc	aag	ttg	gac	tcc	agg	ttg	caa	acc	cct	atg	tac	ttt	ttt	ctc	aga	192
Thr	Lys	Leu	Asp	Ser	Arg	Leu	Gln	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Arg	
	50					55					60					
cat	ctg	gct	ttc	atg	gat	ctt	ggc	tat	tca	aca	act	gtg	gga	ccc	aaa	240
His	Leu	Ala	Phe	Met	Asp	Leu	Gly	Tyr	Ser	Thr	Thr	Val	Gly	Pro	Lys	
65					70					75					80	
atg	tta	gta	aat	ttt	gtt	gtg	gat	aag	aat	ata	att	tct	tat	tat	ttt	288
Met	Leu	Val	Asn	Phe	Val	Val	Asp	Lys	Asn	Ile	Ile	Ser	Tyr	Tyr	Phe	
			85						90					95		
tgt	gca	aca	cag	cta	gct	ttc	ttt	ctt	gtg	ttc	att	ggc	agt	gaa	ctt	336
Cys	Ala	Thr	Gln	Leu	Ala	Phe	Phe	Leu	Val	Phe	Ile	Gly	Ser	Glu	Leu	
			100					105					110			
ttt	att	ctc	tca	gcc	atg	tcc	tac	gac	ctc	tat	gtg	gcc	atc	tgt	aac	384
Phe	Ile	Leu	Ser	Ala	Met	Ser	Tyr	Asp	Leu	Tyr	Val	Ala	Ile	Cys	Asn	
		115					120					125				
cct	ctg	cta	tac	aca	gta	atc	atg	tca	cga	agg	gta	tgt	cag	gtg	ctg	432
Pro	Leu	Leu	Tyr	Thr	Val	Ile	Met	Ser	Arg	Arg	Val	Cys	Gln	Val	Leu	
	130					135					140					
gta	gca	atc	cct	tac	ctc	tat	tgc	aca	ttc	att	tct	ctt	cta	gtc	acc	480
Val	Ala	Ile	Pro	Tyr	Leu	Tyr	Cys	Thr	Phe	Ile	Ser	Leu	Leu	Val	Thr	
145					150					155					160	
ata	aag	att	ttt	act	tta	tcc	ttc	tgt	ggc	tac	aac	gtc	att	agt	cat	528
Ile	Lys	Ile	Phe	Thr	Leu	Ser	Phe	Cys	Gly	Tyr	Asn	Val	Ile	Ser	His	
			165						170					175		
ttc	tac	tgt	gac	agt	ctc	cct	ttg	tta	cct	ttg	ctt	tgt	tca	aat	aca	576
Phe	Tyr	Cys	Asp	Ser	Leu	Pro	Leu	Leu	Pro	Leu	Leu	Cys	Ser	Asn	Thr	
			180				185						190			
cat	gaa	att	gaa	ttg	ata	att	ctg	atc	ttt	gca	gct	att	gat	ttg	att	624
His	Glu	Ile	Glu	Leu	Ile	Ile	Leu	Ile	Phe	Ala	Ala	Ile	Asp	Leu	Ile	
		195					200					205				
tca	tct	ctt	ctg	ata	gtt	ctt	tta	tct	tac	ctg	ctc	atc	ctt	gta	gcc	672
Ser	Ser	Leu	Leu	Ile	Val	Leu	Leu	Ser	Tyr	Leu	Leu	Ile	Leu	Val	Ala	
		210				215						220				
att	ctc	agg	atg	aat	tct	gct	ggc	aga	caa	aag	gct	ttt	tct	acc	tgt	720
Ile	Leu	Arg	Met	Asn	Ser	Ala	Gly	Arg	Gln	Lys	Ala	Phe	Ser	Thr	Cys	
225				230						235					240	
gga	gcc	cac	ctg	aca	gtg	gtc	ata	gtg	ttc	tat	ggg	act	ttg	ctt	ttc	768
Gly	Ala	His	Leu	Thr	Val	Val	Ile	Val	Phe	Tyr	Gly	Thr	Leu	Leu	Phe	
			245					250						255		

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atg tac gtg cag ccc aag tcc agt cat tcc ttt gac act gat aaa gtg 816
 Met Tyr Val Gln Pro Lys Ser Ser His Ser Phe Asp Thr Asp Lys Val
 260 265 270
 gct tcc ata ttt tac acc ctg gtt atc ccc atg ttg aat ccc ttg atc 864
 Ala Ser Ile Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285
 tat agt tta cga aac aaa gat gta aaa tat gcc cta cga agg aca tgg 912
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Tyr Ala Leu Arg Arg Thr Trp
 290 295 300
 aat aac tta tgt aat att ttt gtt taa 939
 Asn Asn Leu Cys Asn Ile Phe Val
 305 310

<210> 60
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 60

Met Glu Gln His Asn Leu Thr Thr Val Asn Glu Phe Ile Leu Thr Gly
 1 5 10 15

Ile Thr Asp Ile Ala Glu Leu Gln Ala Pro Leu Phe Ala Leu Phe Leu
 20 25 30

Met Ile Tyr Val Ile Ser Val Met Gly Asn Leu Gly Met Ile Val Leu
 35 40 45

Thr Lys Leu Asp Ser Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Arg
 50 55 60

His Leu Ala Phe Met Asp Leu Gly Tyr Ser Thr Thr Val Gly Pro Lys
 65 70 75 80

Met Leu Val Asn Phe Val Val Asp Lys Asn Ile Ile Ser Tyr Tyr Phe
 85 90 95

Cys Ala Thr Gln Leu Ala Phe Phe Leu Val Phe Ile Gly Ser Glu Leu
 100 105 110

Phe Ile Leu Ser Ala Met Ser Tyr Asp Leu Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Leu Tyr Thr Val Ile Met Ser Arg Arg Val Cys Gln Val Leu
 130 135 140

Val Ala Ile Pro Tyr Leu Tyr Cys Thr Phe Ile Ser Leu Leu Val Thr

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<400>      61
atg ggt aga aga aat aac aca aat gtg cct gac ttc atc ctt acg gga      48
Met Gly Arg Arg Asn Asn Thr Asn Val Pro Asp Phe Ile Leu Thr Gly
1          5          10          15

ctg tca gat tct gaa gag gtc cag atg gcc ctc ttt ata cta ttt ctc      96
Leu Ser Asp Ser Glu Glu Val Gln Met Ala Leu Phe Ile Leu Phe Leu

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20	25	30	
ctg ata tac cta att act atg ctg ggc aat gtg ggg atg ata ttg ata			144
Leu Ile Tyr Leu Ile Thr Met Leu Gly Asn Val Gly Met Ile Leu Ile	40	45	
35			
atc cgc ctg gac ctc cag ctt cac act ccc atg tat ttt ttc ctt act			192
Ile Arg Leu Asp Leu Gln Leu His Thr Pro Met Tyr Phe Phe Leu Thr	55	60	
50			
cac ttg tca ttt att gac ctc agt tac tca act gtc atc aca cct aaa			240
His Leu Ser Phe Ile Asp Leu Ser Tyr Ser Thr Val Ile Thr Pro Lys	70	75	80
65			
acc tta gcg aac tta ctg act tcc aac tat att tcc ttc atg ggc tgc			288
Thr Leu Ala Asn Leu Leu Thr Ser Asn Tyr Ile Ser Phe Met Gly Cys	85	90	95
ttt gcc cag atg ttc ttt ttt gtc ttc ttg gga gct gct gaa tgt ttt			336
Phe Ala Gln Met Phe Phe Phe Val Phe Leu Gly Ala Ala Glu Cys Phe	100	105	110
ctt ctc tca tca atg gcc tat gat cgc tac gta gct atc tgc agt cct			384
Leu Leu Ser Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser Pro	115	120	125
cta cgt tac cca gtt att atg tcc aaa agg ctg tgt tgc gct ctt gtc			432
Leu Arg Tyr Pro Val Ile Met Ser Lys Arg Leu Cys Cys Ala Leu Val	130	135	140
act ggg ccc tat gtg att agc ttt atc aac tcc ttt gtc aat gtg gtt			480
Thr Gly Pro Tyr Val Ile Ser Phe Ile Asn Ser Phe Val Asn Val Val	145	150	155
tgg atg agc aga ctg cat ttc tgc gac tca aat gta gtt cgt cac ttt			528
Trp Met Ser Arg Leu His Phe Cys Asp Ser Asn Val Val Arg His Phe	165	170	175
ttc tgc gac acg tct cca att tta gct ctg tcc tgc atg gac aca tac			576
Phe Cys Asp Thr Ser Pro Ile Leu Ala Leu Ser Cys Met Asp Thr Tyr	180	185	190
gac att gaa atc atg ata cac att tta gct ggt tcc acc ctg atg gtg			624
Asp Ile Glu Ile Met Ile His Ile Leu Ala Gly Ser Thr Leu Met Val	195	200	205
tcc ctt atc aca ata tct gca tcc tat gtg tcc att ctc tct acc atc			672
Ser Leu Ile Thr Ile Ser Ala Ser Tyr Val Ser Ile Leu Ser Thr Ile	210	215	220
ctg aaa att aat tcc act tca gga aag cag aaa gct ttg tct act tgt			720
Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Leu Ser Thr Cys	225	230	235
gcc tct cat ctc ttg gga gtc acc atc ttt tat gga act atg att ttt			768
Ala Ser His Leu Leu Gly Val Thr Ile Phe Tyr Gly Thr Met Ile Phe	245	250	255
act tat tta aaa cca aga aag tct tat tct ttg gga agg gat caa gtg			816
Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln Val	260	265	270

gct tct gtt ttt tat act att gtg att ccc atg ctg aat cca ctc att 864
 Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285

tat agt ctt aga aac aaa gaa gtt aaa aat gct ctc att aga gtc atg 912
 Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Ala Leu Ile Arg Val Met
 290 295 300

cag aga aga cag gac tcc agg taa 936
 Gln Arg Arg Gln Asp Ser Arg
 305 310

<210> 62
 <211> 311
 <212> PRT
 <213> Homo Sapiens

<400> 62

Met Gly Arg Arg Asn Asn Thr Asn Val Pro Asp Phe Ile Leu Thr Gly
 1 5 10 15

Leu Ser Asp Ser Glu Glu Val Gln Met Ala Leu Phe Ile Leu Phe Leu
 20 25 30

Leu Ile Tyr Leu Ile Thr Met Leu Gly Asn Val Gly Met Ile Leu Ile
 35 40 45

Ile Arg Leu Asp Leu Gln Leu His Thr Pro Met Tyr Phe Phe Leu Thr
 50 55 60

His Leu Ser Phe Ile Asp Leu Ser Tyr Ser Thr Val Ile Thr Pro Lys
 65 70 75 80

Thr Leu Ala Asn Leu Leu Thr Ser Asn Tyr Ile Ser Phe Met Gly Cys
 85 90 95

Phe Ala Gln Met Phe Phe Phe Val Phe Leu Gly Ala Ala Glu Cys Phe
 100 105 110

Leu Leu Ser Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser Pro
 115 120 125

Leu Arg Tyr Pro Val Ile Met Ser Lys Arg Leu Cys Cys Ala Leu Val
 130 135 140

Thr Gly Pro Tyr Val Ile Ser Phe Ile Asn Ser Phe Val Asn Val Val
 145 150 155 160

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Trp Met Ser Arg Leu His Phe Cys Asp Ser Asn Val Val Arg His Phe
 165 170 175

Phe Cys Asp Thr Ser Pro Ile Leu Ala Leu Ser Cys Met Asp Thr Tyr
 180 185 190

Asp Ile Glu Ile Met Ile His Ile Leu Ala Gly Ser Thr Leu Met Val
 195 200 205

Ser Leu Ile Thr Ile Ser Ala Ser Tyr Val Ser Ile Leu Ser Thr Ile
 210 215 220

Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Leu Ser Thr Cys
 225 230 235 240

Ala Ser His Leu Leu Gly Val Thr Ile Phe Tyr Gly Thr Met Ile Phe
 245 250 255

Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln Val
 260 265 270

Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Ala Leu Ile Arg Val Met
 290 295 300

Gln Arg Arg Gln Asp Ser Arg
 305 310

<210> 63
 <211> 951
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(948)
 <223>

<400> 63
 atg gct cct gaa aat ttc acc agg gtc act gag ttt att ctt aca ggt 48
 Met Ala Pro Glu Asn Phe Thr Arg Val Thr Glu Phe Ile Leu Thr Gly
 1 5 10 15
 gtc tct agc tgt cca gag ctg cag att ccc ctg ttc ctg gtc ttt ctg 96
 Val Ser Ser Cys Pro Glu Leu Gln Ile Pro Leu Phe Leu Val Phe Leu
 20 25 30
 gtg ctg tat ggg ctg acc atg gca ggg aac ctg ggc atc atc acc ctg 144

Val Leu Tyr Gly Leu Thr Met Ala Gly Asn Leu Gly Ile Ile Thr Leu	
35 40 45	
acc agt gtt gac tct cga ctt caa acc ccc atg tac ttt ttc ctg caa	192
Thr Ser Val Asp Ser Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Gln	
50 55 60	
cat ctg gct ctc att aat ctt ggt aac tct act gtc att gcc cct aaa	240
His Leu Ala Leu Ile Asn Leu Gly Asn Ser Thr Val Ile Ala Pro Lys	
65 70 75 80	
atg ctg att aac ttt tta gta aag aag aaa act acc tca ttc tat gaa	288
Met Leu Ile Asn Phe Leu Val Lys Lys Lys Thr Thr Ser Phe Tyr Glu	
85 90 95	
tgt gcc acc caa ctg gga ggg ttc ttg ttc ttt att gta tgc gag gta	336
Cys Ala Thr Gln Leu Gly Gly Phe Leu Phe Phe Ile Val Ser Glu Val	
100 105 110	
atc atg ctg gct ttg atg gcc tgt gac cgc tat gtg gct att tgt aac	384
Ile Met Leu Ala Leu Met Ala Cys Asp Arg Tyr Val Ala Ile Cys Asn	
115 120 125	
cct ctg ctg tac atg gtg gtg gtg tct cgg cgg ctc tgc ctc ctg ctg	432
Pro Leu Leu Tyr Met Val Val Val Ser Arg Arg Leu Cys Leu Leu Leu	
130 135 140	
gtc tcc ctc aca tac ctc tat ggc ttt tct aca gct att gtg gtt tca	480
Val Ser Leu Thr Tyr Leu Tyr Gly Phe Ser Thr Ala Ile Val Val Ser	
145 150 155 160	
tct tat gta ttc tct gtg tct tat tgc tct tct aat ata atc aat cat	528
Ser Tyr Val Phe Ser Val Ser Tyr Cys Ser Ser Asn Ile Ile Asn His	
165 170 175	
ttt tac tgt gat aat gtt cct ctg tta gca tta tct tgc tct gat act	576
Phe Tyr Cys Asp Asn Val Pro Leu Leu Ala Leu Ser Cys Ser Asp Thr	
180 185 190	
tac tta cca gaa aca gtt gtc ttt ata tct gca gca aca aat gtg gtt	624
Tyr Leu Pro Glu Thr Val Val Phe Ile Ser Ala Ala Thr Asn Val Val	
195 200 205	
ggg tcc ttg att ata gtt cta gta tct tat ttc aat att gtt ttg tct	672
Gly Ser Leu Ile Ile Val Leu Val Ser Tyr Phe Asn Ile Val Leu Ser	
210 215 220	
att tta aaa ata tgt tca tca gaa gga agg aaa aaa gcc ttt tct acc	720
Ile Leu Lys Ile Cys Ser Ser Glu Gly Arg Lys Lys Ala Phe Ser Thr	
225 230 235 240	
tgt gct tca cat atg atg gca gtc aca att ttt tat ggg aca ttg cta	768
Cys Ala Ser His Met Met Ala Val Thr Ile Phe Tyr Gly Thr Leu Leu	
245 250 255	
ttc atg tat gtg cag ccc cga agt aac cat tca ttg gat act gat gat	816
Phe Met Tyr Val Gln Pro Arg Ser Asn His Ser Leu Asp Thr Asp Asp	
260 265 270	
aag atg gct tct gtg ttt tac acg ttg gta att cct atg ctg aat ccc	864
Lys Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro	

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275 280 285 912
 ttg atc tac agc ctg agg aat aag gat gtg aag act gct cta cag aga
 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Thr Ala Leu Gln Arg
 290 295 300
 ttc atg aca aat ctg tgc tat tcc ttt aaa aca atg taa 951
 Phe Met Thr Asn Leu Cys Tyr Ser Phe Lys Thr Met
 305 310 315

<210> 64
 <211> 316
 <212> PRT
 <213> Homo Sapiens

<400> 64

Met Ala Pro Glu Asn Phe Thr Arg Val Thr Glu Phe Ile Leu Thr Gly
 1 5 10 15

Val Ser Ser Cys Pro Glu Leu Gln Ile Pro Leu Phe Leu Val Phe Leu
 20 25 30

Val Leu Tyr Gly Leu Thr Met Ala Gly Asn Leu Gly Ile Ile Thr Leu
 35 40 45

Thr Ser Val Asp Ser Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Gln
 50 55 60

His Leu Ala Leu Ile Asn Leu Gly Asn Ser Thr Val Ile Ala Pro Lys
 65 70 75 80

Met Leu Ile Asn Phe Leu Val Lys Lys Lys Thr Thr Ser Phe Tyr Glu
 85 90 95

Cys Ala Thr Gln Leu Gly Gly Phe Leu Phe Phe Ile Val Ser Glu Val
 100 105 110

Ile Met Leu Ala Leu Met Ala Cys Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Leu Tyr Met Val Val Val Ser Arg Arg Leu Cys Leu Leu Leu
 130 135 140

Val Ser Leu Thr Tyr Leu Tyr Gly Phe Ser Thr Ala Ile Val Val Ser
 145 150 155 160

Ser Tyr Val Phe Ser Val Ser Tyr Cys Ser Ser Asn Ile Ile Asn His
 165 170 175

Phe Tyr Cys Asp Asn Val Pro Leu Leu Ala Leu Ser Cys Ser Asp Thr
180 185 190

Tyr Leu Pro Glu Thr Val Val Phe Ile Ser Ala Ala Thr Asn Val Val
195 200 205

Gly Ser Leu Ile Ile Val Leu Val Ser Tyr Phe Asn Ile Val Leu Ser
210 215 220

Ile Leu Lys Ile Cys Ser Ser Glu Gly Arg Lys Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Met Met Ala Val Thr Ile Phe Tyr Gly Thr Leu Leu
245 250 255

Phe Met Tyr Val Gln Pro Arg Ser Asn His Ser Leu Asp Thr Asp Asp
260 265 270

Lys Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro
275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Thr Ala Leu Gln Arg
290 295 300

Phe Met Thr Asn Leu Cys Tyr Ser Phe Lys Thr Met
305 310 315

<210> 65
<211> 987
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(984)
<223>

<400> 65
atg aag ctg tgg atg gag agt cac ctg ata gtc cca gaa acc cgt ccc 48
Met Lys Leu Trp Met Glu Ser His Leu Ile Val Pro Glu Thr Arg Pro
1 5 10 15

agc cca agg atg atg agt aac cag acg ttg gta acc gag ttc atc ctg 96
Ser Pro Arg Met Met Ser Asn Gln Thr Leu Val Thr Glu Phe Ile Leu
20 25 30

cag ggc ttt tcg gag cac cca gaa tac cgg gtg ttc tta ttc agc tgt 144
Gln Gly Phe Ser Glu His Pro Glu Tyr Arg Val Phe Leu Phe Ser Cys
35 40 45

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ttc ctc ttc ctc tac tct ggg gcc ctc aca ggt aat gtc ctc atc acc 192
 Phe Leu Phe Leu Tyr Ser Gly Ala Leu Thr Gly Asn Val Leu Ile Thr
 50 55 60

ttg gcc atc acg ttc aac cct ggg ctc cac gct cct atg tac ttt ttc 240
 Leu Ala Ile Thr Phe Asn Pro Gly Leu His Ala Pro Met Tyr Phe Phe
 65 70 75 80

tta ctc aac ttg gct act atg gac att atc tgc acc tct tcc atc atg 288
 Leu Leu Asn Leu Ala Thr Met Asp Ile Ile Cys Thr Ser Ser Ile Met
 85 90 95

ccc aag gcg ctg gcc agt ctg gtg tgc gaa gag agc tcc atc tcc tac 336
 Pro Lys Ala Leu Ala Ser Leu Val Ser Glu Glu Ser Ser Ile Ser Tyr
 100 105 110

ggg ggc tgc atg gcc cag ctc tat ttc ctc acg tgg gct gca tcc tca 384
 Gly Gly Cys Met Ala Gln Leu Tyr Phe Leu Thr Trp Ala Ala Ser Ser
 115 120 125

gag ctg ctg ctc ctc acg gtc atg gcc tat gac cgg tac gca gcc atc 432
 Glu Leu Leu Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile
 130 135 140

tgc cac ccg ctg cat tac agc agc atg atg agc aag gtg ttc tgc agc 480
 Cys His Pro Leu His Tyr Ser Ser Met Met Ser Lys Val Phe Cys Ser
 145 150 155 160

ggg ctg gcc aca gcc gtg tgg ctg ctc tgc gcc gtc aac acg gcc atc 528
 Gly Leu Ala Thr Ala Val Trp Leu Leu Cys Ala Val Asn Thr Ala Ile
 165 170 175

cac acg ggg ctg atg ctg cgc ttg gat ttc tgt ggc ccc aat gtc att 576
 His Thr Gly Leu Met Leu Arg Leu Asp Phe Cys Gly Pro Asn Val Ile
 180 185 190

atc cat ttc ttc tgc gag gtc cct ccc ctg ctg ctt ctc tcc tgc agc 624
 Ile His Phe Phe Cys Glu Val Pro Pro Leu Leu Leu Leu Ser Cys Ser
 195 200 205

tcc acc tac gtc aac ggt gtc atg att gtc ctg gcg gat gct ttc tac 672
 Ser Thr Tyr Val Asn Gly Val Met Ile Val Leu Ala Asp Ala Phe Tyr
 210 215 220

ggc ata gtg aac ttc ctg atg acc atc gcg tcc tat ggc ttc atc gtc 720
 Gly Ile Val Asn Phe Leu Met Thr Ile Ala Ser Tyr Gly Phe Ile Val
 225 230 235 240

tcc agc atc ctg aag gtg aag act gcc tgg ggg agg cag aaa gcc ttc 768
 Ser Ser Ile Leu Lys Val Lys Thr Ala Trp Gly Arg Gln Lys Ala Phe
 245 250 255

tcc acc tgc tct tcc cac ctc acc gtg gtg tgc atg tat tac acc gct 816
 Ser Thr Cys Ser Ser His Leu Thr Val Val Cys Met Tyr Tyr Thr Ala
 260 265 270

gtc ttc tac gcc tac ata agc ccg gtc tct ggc tac agc gca ggg aag 864
 Val Phe Tyr Ala Tyr Ile Ser Pro Val Ser Gly Tyr Ser Ala Gly Lys
 275 280 285

agc aag ttg gct ggc ctg ctg tac act gtg ctg agt cct acc ctc aac 912

Ser Lys Leu Ala Gly Leu Leu Tyr Thr Val Leu Ser Pro Thr Leu Asn
 290 295 300

ccc ctc atc tat act ttg aga aac aag gag gtc aaa gca gcc ctc agg 960
 Pro Leu Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Ala Ala Leu Arg
 305 310 315 320

aag ctt ttc cct ttc ttc aga aat taa 987
 Lys Leu Phe Pro Phe Phe Arg Asn
 325

<210> 66
 <211> 328
 <212> PRT
 <213> Homo Sapiens

<400> 66

Met Lys Leu Trp Met Glu Ser His Leu Ile Val Pro Glu Thr Arg Pro
 1 5 10 15

Ser Pro Arg Met Met Ser Asn Gln Thr Leu Val Thr Glu Phe Ile Leu
 20 25 30

Gln Gly Phe Ser Glu His Pro Glu Tyr Arg Val Phe Leu Phe Ser Cys
 35 40 45

Phe Leu Phe Leu Tyr Ser Gly Ala Leu Thr Gly Asn Val Leu Ile Thr
 50 55 60

Leu Ala Ile Thr Phe Asn Pro Gly Leu His Ala Pro Met Tyr Phe Phe
 65 70 75 80

Leu Leu Asn Leu Ala Thr Met Asp Ile Ile Cys Thr Ser Ser Ile Met
 85 90 95

Pro Lys Ala Leu Ala Ser Leu Val Ser Glu Glu Ser Ser Ile Ser Tyr
 100 105 110

Gly Gly Cys Met Ala Gln Leu Tyr Phe Leu Thr Trp Ala Ala Ser Ser
 115 120 125

Glu Leu Leu Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile
 130 135 140

Cys His Pro Leu His Tyr Ser Ser Met Met Ser Lys Val Phe Cys Ser
 145 150 155 160

Gly Leu Ala Thr Ala Val Trp Leu Leu Cys Ala Val Asn Thr Ala Ile
 165 170 175

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His Thr Gly Leu Met Leu Arg Leu Asp Phe Cys Gly Pro Asn Val Ile
 180 185 190

Ile His Phe Phe Cys Glu Val Pro Pro Leu Leu Leu Leu Ser Cys Ser
 195 200 205

Ser Thr Tyr Val Asn Gly Val Met Ile Val Leu Ala Asp Ala Phe Tyr
 210 215 220

Gly Ile Val Asn Phe Leu Met Thr Ile Ala Ser Tyr Gly Phe Ile Val
 225 230 235 240

Ser Ser Ile Leu Lys Val Lys Thr Ala Trp Gly Arg Gln Lys Ala Phe
 245 250 255

Ser Thr Cys Ser Ser His Leu Thr Val Val Cys Met Tyr Tyr Thr Ala
 260 265 270

Val Phe Tyr Ala Tyr Ile Ser Pro Val Ser Gly Tyr Ser Ala Gly Lys
 275 280 285

Ser Lys Leu Ala Gly Leu Leu Tyr Thr Val Leu Ser Pro Thr Leu Asn
 290 295 300

Pro Leu Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Ala Ala Leu Arg
 305 310 315 320

Lys Leu Phe Pro Phe Phe Arg Asn
 325

<210> 67
 <211> 960
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(957)
 <223>

<400> 67
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 Met Thr Pro Gly Glu Leu Ala Leu Ala Ser Gly Asn His Thr Pro Val
 1 5 10 15

acc aag ttc atc ttg cag gga ttc tcc aat tat cca gac ctc cag gag
 Thr Lys Phe Ile Leu Gln Gly Phe Ser Asn Tyr Pro Asp Leu Gln Glu
 20 25 30

48

96

ctt ctc ttc gga gcc atc ctg ctc atc tat gcc ata aca gtg gtg ggc	144
Leu Leu Phe Gly Ala Ile Leu Leu Ile Tyr Ala Ile Thr Val Val Gly	
35 40 45	
aac ttg gga atg atg gca ctc atc ttc aca gac tcc cat ctc caa agc	192
Asn Leu Gly Met Met Ala Leu Ile Phe Thr Asp Ser His Leu Gln Ser	
50 55 60	
cca atg tat ttc ttc ctc aat gtc ctc tcg ttt ctt gat att tgt tac	240
Pro Met Tyr Phe Phe Leu Asn Val Leu Ser Phe Leu Asp Ile Cys Tyr	
65 70 75 80	
tct tct gtg gtc aca cct aag ctc ttg gtc aac ttc ctg gtc tct gac	288
Ser Ser Val Val Thr Pro Lys Leu Leu Val Asn Phe Leu Val Ser Asp	
85 90 95	
aag tcc atc tct ttt gag ggc tgt gtg gtc cag ctc gcc ttc ttt gta	336
Lys Ser Ile Ser Phe Glu Gly Cys Val Val Gln Leu Ala Phe Phe Val	
100 105 110	
gtg cat gtg aca gct gag agc ttc ctg ctg gcc tcc atg gcc tat gac	384
Val His Val Thr Ala Glu Ser Phe Leu Leu Ala Ser Met Ala Tyr Asp	
115 120 125	
cgc ttc cta gcc atc tgt caa ccc ctc cat tat ggt tct atc atg acc	432
Arg Phe Leu Ala Ile Cys Gln Pro Leu His Tyr Gly Ser Ile Met Thr	
130 135 140	
agg ggg acc tgt ctc cag ctg gta gct gtg tcc tat gca ttt ggt gga	480
Arg Gly Thr Cys Leu Gln Leu Val Ala Val Ser Tyr Ala Phe Gly Gly	
145 150 155 160	
gcc aac tcc gct atc cag act gga aat gtc ttt gcc ctg cct ttc tgt	528
Ala Asn Ser Ala Ile Gln Thr Gly Asn Val Phe Ala Leu Pro Phe Cys	
165 170 175	
ggg ccc aac cag cta aca cac tac tac tgt gac ata cca ccc ctt ctc	576
Gly Pro Asn Gln Leu Thr His Tyr Tyr Cys Asp Ile Pro Pro Leu Leu	
180 185 190	
cac ctg gct tgt gcc aac aca gcc aca gca aga gtg gtc ctc tat gtc	624
His Leu Ala Cys Ala Asn Thr Ala Thr Ala Arg Val Val Leu Tyr Val	
195 200 205	
ttt tct gct ctg gtc acc ctt ctg cct gct gca gtc att ctc acc tcc	672
Phe Ser Ala Leu Val Thr Leu Leu Pro Ala Ala Val Ile Leu Thr Ser	
210 215 220	
tac tgc ttg gtc ttg gtg gcc att ggg agg atg cgc tca gta gca ggg	720
Tyr Cys Leu Val Leu Val Ala Ile Gly Arg Met Arg Ser Val Ala Gly	
225 230 235 240	
agg gag aag gac ctc tcc act tgt gcc tcc cac ttt ctg gcc att gcc	768
Arg Glu Lys Asp Leu Ser Thr Cys Ala Ser His Phe Leu Ala Ile Ala	
245 250 255	
att ttc tat ggc acc gtg gtt ttc acc tat gtt cag ccc cat gga tct	816
Ile Phe Tyr Gly Thr Val Val Phe Thr Tyr Val Gln Pro His Gly Ser	
260 265 270	

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act aac aat acc aat ggc caa gta gtg tcc gtc ttc tac acc atc ata 864
 Thr Asn Asn Thr Asn Gly Gln Val Val Ser Val Phe Tyr Thr Ile Ile
 275 280 285

att ccc atg ctc aat ccc ttc atc tat agc ctc cgc aac aag gag gtg 912
 Ile Pro Met Leu Asn Pro Phe Ile Tyr Ser Leu Arg Asn Lys Glu Val
 290 295 300

aag ggc gct ctg cag agg aag ctt cag gtc aac atc ttt ccc ggc tga 960
 Lys Gly Ala Leu Gln Arg Lys Leu Gln Val Asn Ile Phe Pro Gly
 305 310 315

<210> 68
 <211> 319
 <212> PRT
 <213> Homo Sapiens

<400> 68

Met Thr Pro Gly Glu Leu Ala Leu Ala Ser Gly Asn His Thr Pro Val
 1 5 10 15

Thr Lys Phe Ile Leu Gln Gly Phe Ser Asn Tyr Pro Asp Leu Gln Glu
 20 25 30

Leu Leu Phe Gly Ala Ile Leu Leu Ile Tyr Ala Ile Thr Val Val Gly
 35 40 45

Asn Leu Gly Met Met Ala Leu Ile Phe Thr Asp Ser His Leu Gln Ser
 50 55 60

Pro Met Tyr Phe Phe Leu Asn Val Leu Ser Phe Leu Asp Ile Cys Tyr
 65 70 75 80

Ser Ser Val Val Thr Pro Lys Leu Leu Val Asn Phe Leu Val Ser Asp
 85 90 95

Lys Ser Ile Ser Phe Glu Gly Cys Val Val Gln Leu Ala Phe Phe Val
 100 105 110

Val His Val Thr Ala Glu Ser Phe Leu Leu Ala Ser Met Ala Tyr Asp
 115 120 125

Arg Phe Leu Ala Ile Cys Gln Pro Leu His Tyr Gly Ser Ile Met Thr
 130 135 140

Arg Gly Thr Cys Leu Gln Leu Val Ala Val Ser Tyr Ala Phe Gly Gly
 145 150 155 160

Ala Asn Ser Ala Ile Gln Thr Gly Asn Val Phe Ala Leu Pro Phe Cys

<400>	69																	
atg	aga	aat	ggc	aca	gta	atc	aca	gaa	ttc	atc	ctg	cta	ggc	ttt	cct			48
Met	Arg	Asn	Gly	Thr	Val	Ile	Thr	Glu	Phe	Ile	Leu	Leu	Gly	Phe	Pro			
1				5					10					15				
gtt	atc	caa	ggc	cta	caa	aca	cct	ctc	ttt	att	gca	atc	ttt	ctc	acc			96
Val	Ile	Gln	Gly	Leu	Gln	Thr	Pro	Leu	Phe	Ile	Ala	Ile	Phe	Leu	Thr			
			20					25					30					
tac	ata	tta	acc	ctt	gca	ggc	aat	ggg	ctt	att	att	gcc	act	gtg	tgg			144
Tyr	Ile	Leu	Thr	Leu	Ala	Gly	Asn	Gly	Leu	Ile	Ile	Ala	Thr	Val	Trp			

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35	40	45	
gct gag ccc agg cta caa att cca atg tac ttc ttc ctt tgt aac ttg			192
Ala Glu Pro Arg Leu Gln Ile Pro Met Tyr Phe Phe Leu Cys Asn Leu			
50	55	60	
tct ttc tta gaa atc tgg tac acc acc aca gtc atc ccc aaa ctg cta			240
Ser Phe Leu Glu Ile Trp Tyr Thr Thr Thr Val Ile Pro Lys Leu Leu			
65	70	75	80
gga acc ttt gta gtg gca aga aca gta atc tgc atg tcc tgc tgc ctg			288
Gly Thr Phe Val Val Ala Arg Thr Val Ile Cys Met Ser Cys Cys Leu			
85	90	95	
ctg cag gcc ttc ttc cac ttc ttc gtg ggc acc acc gag ttc ttg atc			336
Leu Gln Ala Phe Phe His Phe Phe Val Gly Thr Thr Glu Phe Leu Ile			
100	105	110	
ctc act atc atg tct ttt gac cgc tac ctc acc atc tgc aat ccc ctt			384
Leu Thr Ile Met Ser Phe Asp Arg Tyr Leu Thr Ile Cys Asn Pro Leu			
115	120	125	
cac cac ccc acc atc atg acc agc aaa ctc tgc ctg cag ctg gcc ctg			432
His His Pro Thr Ile Met Thr Ser Lys Leu Cys Leu Gln Leu Ala Leu			
130	135	140	
agc tcc tgg gtg gtg ggc ttc acc att gtc ttt tgt cag acg atg ctg			480
Ser Ser Trp Val Val Gly Phe Thr Ile Val Phe Cys Gln Thr Met Leu			
145	150	155	160
ctc atc cag ttg cca ttc tgt ggc aat aat gtt atc agt cat ttc tac			528
Leu Ile Gln Leu Pro Phe Cys Gly Asn Asn Val Ile Ser His Phe Tyr			
165	170	175	
tgt gat gtt ggg ccc agt ttg aaa gcc gcc tgc ata gac acc agc att			576
Cys Asp Val Gly Pro Ser Leu Lys Ala Ala Cys Ile Asp Thr Ser Ile			
180	185	190	
ttg gaa ctc ctg ggc gtc ata gca acc atc ctt gtg atc cca ggg tca			624
Leu Glu Leu Leu Gly Val Ile Ala Thr Ile Leu Val Ile Pro Gly Ser			
195	200	205	
ctt ctc ttt aat atg att tct tat atc tac att ctg tcc gca atc cta			672
Leu Leu Phe Asn Met Ile Ser Tyr Ile Tyr Ile Leu Ser Ala Ile Leu			
210	215	220	
cga att cct tca gcc act ggc cac caa aag act ttc tct acc tgt gcc			720
Arg Ile Pro Ser Ala Thr Gly His Gln Lys Thr Phe Ser Thr Cys Ala			
225	230	235	240
tcg cac ctg aca gtt gtc tcc ctg ctc tac ggg gct gtt ctg ttc atg			768
Ser His Leu Thr Val Val Ser Leu Leu Tyr Gly Ala Val Leu Phe Met			
245	250	255	
tac cta aga ccc aca gca cac tcc tcc ttt aag att aat aag gtg gtg			816
Tyr Leu Arg Pro Thr Ala His Ser Ser Phe Lys Ile Asn Lys Val Val			
260	265	270	
tct gtg cta aat act atc ctc acc ccc ctt ctg aat ccc ttt att tat			864
Ser Val Leu Asn Thr Ile Leu Thr Pro Leu Leu Asn Pro Phe Ile Tyr			
275	280	285	

act att aga aac aag gag gtg aag gga gcc tta aga aag gca atg act 912
 Thr Ile Arg Asn Lys Glu Val Lys Gly Ala Leu Arg Lys Ala Met Thr
 290 295 300

tgc cca aag act ggt cat gca aag taa 939
 Cys Pro Lys Thr Gly His Ala Lys
 305 310

<210> 70
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 70

Met Arg Asn Gly Thr Val Ile Thr Glu Phe Ile Leu Leu Gly Phe Pro
 1 5 10 15

Val Ile Gln Gly Leu Gln Thr Pro Leu Phe Ile Ala Ile Phe Leu Thr
 20 25 30

Tyr Ile Leu Thr Leu Ala Gly Asn Gly Leu Ile Ile Ala Thr Val Trp
 35 40 45

Ala Glu Pro Arg Leu Gln Ile Pro Met Tyr Phe Phe Leu Cys Asn Leu
 50 55 60

Ser Phe Leu Glu Ile Trp Tyr Thr Thr Thr Val Ile Pro Lys Leu Leu
 65 70 75 80

Gly Thr Phe Val Val Ala Arg Thr Val Ile Cys Met Ser Cys Cys Leu
 85 90 95

Leu Gln Ala Phe Phe His Phe Phe Val Gly Thr Thr Glu Phe Leu Ile
 100 105 110

Leu Thr Ile Met Ser Phe Asp Arg Tyr Leu Thr Ile Cys Asn Pro Leu
 115 120 125

His His Pro Thr Ile Met Thr Ser Lys Leu Cys Leu Gln Leu Ala Leu
 130 135 140

Ser Ser Trp Val Val Gly Phe Thr Ile Val Phe Cys Gln Thr Met Leu
 145 150 155 160

Leu Ile Gln Leu Pro Phe Cys Gly Asn Asn Val Ile Ser His Phe Tyr
 165 170 175

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Cys Asp Val Gly Pro Ser Leu Lys Ala Ala Cys Ile Asp Thr Ser Ile
180 185 190

Leu Glu Leu Leu Gly Val Ile Ala Thr Ile Leu Val Ile Pro Gly Ser
195 200 205

Leu Leu Phe Asn Met Ile Ser Tyr Ile Tyr Ile Leu Ser Ala Ile Leu
210 215 220

Arg Ile Pro Ser Ala Thr Gly His Gln Lys Thr Phe Ser Thr Cys Ala
225 230 235 240

Ser His Leu Thr Val Val Ser Leu Leu Tyr Gly Ala Val Leu Phe Met
245 250 255

Tyr Leu Arg Pro Thr Ala His Ser Ser Phe Lys Ile Asn Lys Val Val
260 265 270

Ser Val Leu Asn Thr Ile Leu Thr Pro Leu Leu Asn Pro Phe Ile Tyr
275 280 285

Thr Ile Arg Asn Lys Glu Val Lys Gly Ala Leu Arg Lys Ala Met Thr
290 295 300

Cys Pro Lys Thr Gly His Ala Lys
305 310

<210> 71
<211> 1038
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(1035)
<223>

<400> 71 48
atg aat atc aca ctt tat tca ttt ctt tat gtc ctc aga tta aat gaa
Met Asn Ile Thr Leu Tyr Ser Phe Leu Tyr Val Leu Arg Leu Asn Glu
1 5 10 15

ggg aat agt act gga aga aat ata gat gaa aga aag aaa atg caa gga 96
Gly Asn Ser Thr Gly Arg Asn Ile Asp Glu Arg Lys Lys Met Gln Gly
20 25 30

gaa aac ttc acc att tgg agc att ttt ttc ttg gag gga ttt tcc cag 144
Glu Asn Phe Thr Ile Trp Ser Ile Phe Phe Leu Glu Gly Phe Ser Gln
35 40 45

tac cca ggg tta gaa gtg gtt ctc ttc gtc ttc agc ctt gta atg tat 192

Tyr	Pro	Gly	Leu	Glu	Val	Val	Leu	Phe	Val	Phe	Ser	Leu	Val	Met	Tyr	
50						55					60					
ctg	aca	acg	ctc	ttg	ggc	aac	agc	act	ctt	att	ttg	atc	act	atc	cta	240
Leu	Thr	Thr	Leu	Leu	Gly	Asn	Ser	Thr	Leu	Ile	Leu	Ile	Thr	Ile	Leu	
65					70					75					80	
gat	tca	cgc	ctt	aaa	acc	ccc	atg	tac	tta	ttc	ctt	gga	aat	ctc	tct	288
Asp	Ser	Arg	Leu	Lys	Thr	Pro	Met	Tyr	Leu	Phe	Leu	Gly	Asn	Leu	Ser	
				85					90					95		
ttc	atg	gat	att	tgt	tac	aca	tct	gcc	tct	gtt	cct	act	ttg	ctg	gtg	336
Phe	Met	Asp	Ile	Cys	Tyr	Thr	Ser	Ala	Ser	Val	Pro	Thr	Leu	Leu	Val	
			100					105						110		
aac	ttg	ctg	tca	tcc	cag	aaa	acc	att	atc	ttt	tct	ggg	tgt	gct	gta	384
Asn	Leu	Leu	Ser	Ser	Gln	Lys	Thr	Ile	Ile	Phe	Ser	Gly	Cys	Ala	Val	
			115				120					125				
cag	atg	tat	ctg	tcc	ctt	gcc	atg	ggc	tcc	aca	gag	tgt	gtg	ctc	ctg	432
Gln	Met	Tyr	Leu	Ser	Leu	Ala	Met	Gly	Ser	Thr	Glu	Cys	Val	Leu	Leu	
	130					135					140					
gcc	gtg	atg	gca	tat	gac	cgt	tat	gtg	gcc	att	tgt	aac	ccg	ctg	aga	480
Ala	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	Pro	Leu	Arg	
145					150					155					160	
tac	tcc	atc	atc	atg	aac	agg	tgc	gtc	tgt	gca	cgg	atg	gcc	acg	gtc	528
Tyr	Ser	Ile	Ile	Met	Asn	Arg	Cys	Val	Cys	Ala	Arg	Met	Ala	Thr	Val	
				165					170					175		
tcc	tgg	gtg	acg	ggg	tgc	ctg	acc	gct	ctg	ctg	gaa	acc	agt	ttt	gcc	576
Ser	Trp	Val	Thr	Gly	Cys	Leu	Thr	Ala	Leu	Leu	Glu	Thr	Ser	Phe	Ala	
			180					185					190			
ctg	cag	ata	ccc	ctc	tgt	ggg	aat	ctc	atc	gat	cac	ttc	acg	tgt	gaa	624
Leu	Gln	Ile	Pro	Leu	Cys	Gly	Asn	Leu	Ile	Asp	His	Phe	Thr	Cys	Glu	
			195				200					205				
att	ctg	gcg	gtg	cta	aag	tta	gct	tgc	aca	agt	tca	ctg	ctc	atg	aac	672
Ile	Leu	Ala	Val	Leu	Lys	Leu	Ala	Cys	Thr	Ser	Ser	Leu	Leu	Met	Asn	
			210			215					220					
acc	atc	atg	ctg	gtg	gtc	agc	att	ctc	ctc	ttg	cca	att	cca	atg	ctc	720
Thr	Ile	Met	Leu	Val	Val	Ser	Ile	Leu	Leu	Leu	Pro	Ile	Pro	Met	Leu	
225					230					235					240	
tta	gtt	tgc	atc	tct	tac	atc	ttc	atc	ctt	tcc	act	att	ctg	aga	atc	768
Leu	Val	Cys	Ile	Ser	Tyr	Ile	Phe	Ile	Leu	Ser	Thr	Ile	Leu	Arg	Ile	
				245					250					255		
acc	tca	gca	gag	gga	aga	aac	aag	gct	ttt	tct	acc	tgt	ggg	gcc	cat	816
Thr	Ser	Ala	Glu	Gly	Arg	Asn	Lys	Ala	Phe	Ser	Thr	Cys	Gly	Ala	His	
			260					265					270			
ttg	act	gtg	gtg	att	ttg	tat	tat	ggg	gct	gcc	ctc	tct	atg	tac	cta	864
Leu	Thr	Val	Val	Ile	Leu	Tyr	Tyr	Gly	Ala	Ala	Leu	Ser	Met	Tyr	Leu	
			275				280					285				
aag	cct	tct	tca	tca	aat	gca	caa	aaa	ata	gac	aaa	atc	atc	tcg	ttg	912
Lys	Pro	Ser	Ser	Ser	Asn	Ala	Gln	Lys	Ile	Asp	Lys	Ile	Ile	Ser	Leu	

108

Tyr Ser Ile Ile Met Asn Arg Cys Val Cys Ala Arg Met Ala Thr Val
 165 170 175

Ser Trp Val Thr Gly Cys Leu Thr Ala Leu Leu Glu Thr Ser Phe Ala
 180 185 190

Leu Gln Ile Pro Leu Cys Gly Asn Leu Ile Asp His Phe Thr Cys Glu
 195 200 205

Ile Leu Ala Val Leu Lys Leu Ala Cys Thr Ser Ser Leu Leu Met Asn
 210 215 220

Thr Ile Met Leu Val Val Ser Ile Leu Leu Leu Pro Ile Pro Met Leu
 225 230 235 240

Leu Val Cys Ile Ser Tyr Ile Phe Ile Leu Ser Thr Ile Leu Arg Ile
 245 250 255

Thr Ser Ala Glu Gly Arg Asn Lys Ala Phe Ser Thr Cys Gly Ala His
 260 265 270

Leu Thr Val Val Ile Leu Tyr Tyr Gly Ala Ala Leu Ser Met Tyr Leu
 275 280 285

Lys Pro Ser Ser Ser Asn Ala Gln Lys Ile Asp Lys Ile Ile Ser Leu
 290 295 300

Leu Tyr Gly Val Leu Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu
 305 310 315 320

Arg Asn Lys Glu Val Lys Asp Ala Met Lys Lys Leu Leu Gly Lys Ile
 325 330 335

Thr Leu His Gln Thr His Glu His Leu
 340 345

<210> 73
 <211> 930
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (927)
 <223>

<400> 73

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atg aag aga aag aac ttc aca gaa gtg tca gaa ttc att ttc ttg gga 48
 Met Lys Arg Lys Asn Phe Thr Glu Val Ser Glu Phe Ile Phe Leu Gly 15
 1 5 10

ttt tct agc ttt gga aag cat cag ata acc ctc ttt gtg gtt ttc cta 96
 Phe Ser Ser Phe Gly Lys His Gln Ile Thr Leu Phe Val Val Phe Leu 30
 20 25

act gtc tac att tta act ctg gtt gct aac atc atc att gtg act atc 144
 Thr Val Tyr Ile Leu Thr Leu Val Ala Asn Ile Ile Ile Val Thr Ile 45
 35 40

atc tgc att gac cat cat ctc cac act ccc atg tat ttc ttc cta agc 192
 Ile Cys Ile Asp His His Leu His Thr Pro Met Tyr Phe Phe Leu Ser 60
 50 55

atg ctg gct agt tca gag acg gtg tac aca ctg gtc att gtg cca cga 240
 Met Leu Ala Ser Ser Glu Thr Val Tyr Thr Leu Val Ile Val Pro Arg 80
 65 70 75

atg ctt ttg agc ctc att ttt cat aac caa cct atc tcc ttg gca ggc 288
 Met Leu Leu Ser Leu Ile Phe His Asn Gln Pro Ile Ser Leu Ala Gly 95
 85 90

tgt gct aca caa atg ttc ttt ttt gtt atc ttg gcc act aat aat tgc 336
 Cys Ala Thr Gln Met Phe Phe Phe Val Ile Leu Ala Thr Asn Asn Cys 110
 100 105

ttc ctg ctt act gca atg ggg tat gac cgc tat gtg gcc atc tgc aga 384
 Phe Leu Leu Thr Ala Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys Arg 125
 115 120

ccc ctg aga tac act gtc atc atg agc aag gga cta tgt gcc cag ctg 432
 Pro Leu Arg Tyr Thr Val Ile Met Ser Lys Gly Leu Cys Ala Gln Leu 140
 130 135

gtg tgt ggg tcc ttt ggc att ggt ctg act atg gca gtt ctc cat gtg 480
 Val Cys Gly Ser Phe Gly Ile Gly Leu Thr Met Ala Val Leu His Val 160
 145 150 155

aca gcc atg ttc aat ttg ccg ttc tgt ggc aca gtg gta gac cac ttc 528
 Thr Ala Met Phe Asn Leu Pro Phe Cys Gly Thr Val Val Asp His Phe 175
 165 170

ttt tgt gac att tac cca gtc atg aaa ctt tct tgc att gat acc act 576
 Phe Cys Asp Ile Tyr Pro Val Met Lys Leu Ser Cys Ile Asp Thr Thr 190
 180 185

atc aat gag ata ata aat tat ggt gta agt tca ttt gtg att ttt gtg 624
 Ile Asn Glu Ile Ile Asn Tyr Gly Val Ser Ser Phe Val Ile Phe Val 205
 195 200

ccc ata ggc ctg ata ttt atc tcc tat gtc ctt gtc atc tct tcc atc 672
 Pro Ile Gly Leu Ile Phe Ile Ser Tyr Val Leu Val Ile Ser Ser Ile 220
 210 215

ctt caa att gcc tca gct gag ggc cgg aag aag acc ttt gcc acc tgt 720
 Leu Gln Ile Ala Ser Ala Glu Gly Arg Lys Lys Thr Phe Ala Thr Cys 240
 225 230 235

gtc tcc cac ctc act gtg gtt att gtc cac tgt ggc tgt gcc tcc att 768

Val Ser His Leu Thr Val Val Ile Val His Cys Gly Cys Ala Ser Ile
 245 250 255
 gcc tac ctc aag ccg aag tca gaa agt tca ata gaa aaa gac ctt gtt 816
 Ala Tyr Leu Lys Pro Lys Ser Glu Ser Ser Ile Glu Lys Asp Leu Val
 260 265 270
 ctc tca gtg acg tac acc atc atc act ccc ttg ctg aac cct gtt gtt 864
 Leu Ser Val Thr Tyr Thr Ile Ile Thr Pro Leu Leu Asn Pro Val Val
 275 280 285
 tac agt ctg aga aac aag gag gta aag gat gcc cta tgc aga gtt gtg 912
 Tyr Ser Leu Arg Asn Lys Glu Val Lys Asp Ala Leu Cys Arg Val Val
 290 295 300
 ggc aga aat att tct taa 930
 Gly Arg Asn Ile Ser
 305
 <210> 74
 <211> 309
 <212> PRT
 <213> Homo Sapiens
 <400> 74
 Met Lys Arg Lys Asn Phe Thr Glu Val Ser Glu Phe Ile Phe Leu Gly
 1 5 10 15
 Phe Ser Ser Phe Gly Lys His Gln Ile Thr Leu Phe Val Val Phe Leu
 20 25 30
 Thr Val Tyr Ile Leu Thr Leu Val Ala Asn Ile Ile Ile Val Thr Ile
 35 40 45
 Ile Cys Ile Asp His His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 Met Leu Ala Ser Ser Glu Thr Val Tyr Thr Leu Val Ile Val Pro Arg
 65 70 75 80
 Met Leu Leu Ser Leu Ile Phe His Asn Gln Pro Ile Ser Leu Ala Gly
 85 90 95
 Cys Ala Thr Gln Met Phe Phe Phe Val Ile Leu Ala Thr Asn Asn Cys
 100 105 110
 Phe Leu Leu Thr Ala Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys Arg
 115 120 125
 Pro Leu Arg Tyr Thr Val Ile Met Ser Lys Gly Leu Cys Ala Gln Leu
 130 135 140

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Val Cys Gly Ser Phe Gly Ile Gly Leu Thr Met Ala Val Leu His Val
 145 150 155 160

Thr Ala Met Phe Asn Leu Pro Phe Cys Gly Thr Val Val Asp His Phe
 165 170 175

Phe Cys Asp Ile Tyr Pro Val Met Lys Leu Ser Cys Ile Asp Thr Thr
 180 185 190

Ile Asn Glu Ile Ile Asn Tyr Gly Val Ser Ser Phe Val Ile Phe Val
 195 200 205

Pro Ile Gly Leu Ile Phe Ile Ser Tyr Val Leu Val Ile Ser Ser Ile
 210 215 220

Leu Gln Ile Ala Ser Ala Glu Gly Arg Lys Lys Thr Phe Ala Thr Cys
 225 230 235 240

Val Ser His Leu Thr Val Val Ile Val His Cys Gly Cys Ala Ser Ile
 245 250 255

Ala Tyr Leu Lys Pro Lys Ser Glu Ser Ser Ile Glu Lys Asp Leu Val
 260 265 270

Leu Ser Val Thr Tyr Thr Ile Ile Thr Pro Leu Leu Asn Pro Val Val
 275 280 285

Tyr Ser Leu Arg Asn Lys Glu Val Lys Asp Ala Leu Cys Arg Val Val
 290 295 300

Gly Arg Asn Ile Ser
 305

<210> 75
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1) .. (942)
 <223>

<400> 75
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 Met Gly Asp Val Asn Gln Ser Val Ala Ser Asp Phe Ile Leu Val Gly
 1 5 10 15

ctc ttc agt cac tca gga tca cgc cag ctc ctc ttc tcc ctg gtg gct	96
Leu Phe Ser His Ser Gly Ser Arg Gln Leu Leu Phe Ser Leu Val Ala	
20 25 30	
gtc atg ttt gtc ata ggc ctt ctg ggc aac acc gtt ctt ctc ttc ttg	144
Val Met Phe Val Ile Gly Leu Leu Gly Asn Thr Val Leu Leu Phe Leu	
35 40 45	
atc cgt gtg gac tcc cgg ctc cac aca ccc atg tac ttc ctg ctc agc	192
Ile Arg Val Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser	
50 55 60	
cag ctc tcc ctg ttt gac att ggc tgt ccc atg gtc acc atc ccc aag	240
Gln Leu Ser Leu Phe Asp Ile Gly Cys Pro Met Val Thr Ile Pro Lys	
65 70 75 80	
atg gca tca gac ttt ctg cgg gga gaa ggt gcc acc tcc tat gga ggt	288
Met Ala Ser Asp Phe Leu Arg Gly Glu Gly Ala Thr Ser Tyr Gly Gly	
85 90 95	
ggc gca gct caa ata ttc ttc ctc aca ctg atg ggt gtg gct gag ggc	336
Gly Ala Ala Gln Ile Phe Phe Leu Thr Leu Met Gly Val Ala Glu Gly	
100 105 110	
gtc ctg ttg gtc ctc atg tct tat gac cgt tat gtt gct gtg tgc cag	384
Val Leu Leu Val Leu Met Ser Tyr Asp Arg Tyr Val Ala Val Cys Gln	
115 120 125	
ccc ctg cag tat cct gta ctt atg aga cgc cag gta tgt ctg ctg atg	432
Pro Leu Gln Tyr Pro Val Leu Met Arg Arg Gln Val Cys Leu Leu Met	
130 135 140	
atg ggc tcc tcc tgg gtg gta ggt gtg ctc aac gcc tcc atc cag acc	480
Met Gly Ser Ser Trp Val Val Gly Val Leu Asn Ala Ser Ile Gln Thr	
145 150 155 160	
tcc atc acc ctg cat ttt ccc tac tgt gcc tcc cgt att gtg gat cac	528
Ser Ile Thr Leu His Phe Pro Tyr Cys Ala Ser Arg Ile Val Asp His	
165 170 175	
ttc ttc tgt gag gtg cca gcc cta ctg aag ctc tcc tgt gca gat acc	576
Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Ala Asp Thr	
180 185 190	
tgt gcc tac gag atg gcg ctg tcc acc tca ggg gtg ctg atc cta atg	624
Cys Ala Tyr Glu Met Ala Leu Ser Thr Ser Gly Val Leu Ile Leu Met	
195 200 205	
ctc cct ctt tcc ctc atc gcc acc tcc tac ggc cac gtg ttg cag gct	672
Leu Pro Leu Ser Leu Ile Ala Thr Ser Tyr Gly His Val Leu Gln Ala	
210 215 220	
gtt cta agc atg cgc tca gag gag gcc aga cac aag gct gtc acc acc	720
Val Leu Ser Met Arg Ser Glu Glu Ala Arg His Lys Ala Val Thr Thr	
225 230 235 240	
tgc tcc tcg cac atc acg gta gtg ggg ctc ttt tat ggt gcc gcc gtg	768
Cys Ser Ser His Ile Thr Val Val Gly Leu Phe Tyr Gly Ala Ala Val	
245 250 255	

ttc atg tac atg gtg cct tgc gcc tac cac agt cca cag cag gat aac 816
 Phe Met Tyr Met Val Pro Cys Ala Tyr His Ser Pro Gln Gln Asp Asn
 260 265 270
 gtg gtt tcc ctc ttc tat agc ctt gtc acc cct aca ctc aac ccc ctt 864
 Val Val Ser Leu Phe Tyr Ser Leu Val Thr Pro Thr Leu Asn Pro Leu
 275 280 285
 atc tac agt ctg agg aat ccg gag gtg tgg atg gct ttg gtc aaa gtg 912
 Ile Tyr Ser Leu Arg Asn Pro Glu Val Trp Met Ala Leu Val Lys Val
 290 295 300
 ctt agc aga gct gga ctc agg caa atg tgc tga 945
 Leu Ser Arg Ala Gly Leu Arg Gln Met Cys
 305 310

<210> 76
 <211> 314
 <212> PRT
 <213> Homo Sapiens

<400> 76

Met Gly Asp Val Asn Gln Ser Val Ala Ser Asp Phe Ile Leu Val Gly
 1 5 10 15

Leu Phe Ser His Ser Gly Ser Arg Gln Leu Leu Phe Ser Leu Val Ala
 20 25 30

Val Met Phe Val Ile Gly Leu Leu Gly Asn Thr Val Leu Leu Phe Leu
 35 40 45

Ile Arg Val Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60

Gln Leu Ser Leu Phe Asp Ile Gly Cys Pro Met Val Thr Ile Pro Lys
 65 70 75 80

Met Ala Ser Asp Phe Leu Arg Gly Glu Gly Ala Thr Ser Tyr Gly Gly
 85 90 95

Gly Ala Ala Gln Ile Phe Phe Leu Thr Leu Met Gly Val Ala Glu Gly
 100 105 110

Val Leu Leu Val Leu Met Ser Tyr Asp Arg Tyr Val Ala Val Cys Gln
 115 120 125

Pro Leu Gln Tyr Pro Val Leu Met Arg Arg Gln Val Cys Leu Leu Met
 130 135 140

Met Gly Ser Ser Trp Val Val Gly Val Leu Asn Ala Ser Ile Gln Thr

145 150 155 160
 Ser Ile Thr Leu His Phe Pro Tyr Cys Ala Ser Arg Ile Val Asp His
 165 170 175
 Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Ala Asp Thr
 180 185 190
 Cys Ala Tyr Glu Met Ala Leu Ser Thr Ser Gly Val Leu Ile Leu Met
 195 200 205
 Leu Pro Leu Ser Leu Ile Ala Thr Ser Tyr Gly His Val Leu Gln Ala
 210 215 220
 Val Leu Ser Met Arg Ser Glu Glu Ala Arg His Lys Ala Val Thr Thr
 225 230 235 240
 Cys Ser Ser His Ile Thr Val Val Gly Leu Phe Tyr Gly Ala Ala Val
 245 250 255
 Phe Met Tyr Met Val Pro Cys Ala Tyr His Ser Pro Gln Gln Asp Asn
 260 265 270
 Val Val Ser Leu Phe Tyr Ser Leu Val Thr Pro Thr Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Pro Glu Val Trp Met Ala Leu Val Lys Val
 290 295 300
 Leu Ser Arg Ala Gly Leu Arg Gln Met Cys
 305 310

<210> 77
 <211> 954
 <212> DNA
 <213> Homo Sapiens
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 <222> (1) .. (951)
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<400> 77
 atg cta agg aat ggc agc ata gtg acg gaa ttt atc ctc gtg ggc ttt 48
 Met Leu Arg Asn Gly Ser Ile Val Thr Glu Phe Ile Leu Val Gly Phe
 1 5 10 15
 cag cag agc tcc act tcc aca cga gca ttg ctc ttt gcc ctc ttc ttg 96
 Gln Gln Ser Ser Thr Ser Thr Arg Ala Leu Leu Phe Ala Leu Phe Leu

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20	25	30	
gcc ctc tac agc ctc acc atg gcc atg aat ggc ctc atc atc ttt atc Ala Leu Tyr Ser Leu Thr Met Ala Met Asn Gly Leu Ile Ile Phe Ile 35 40 45			144
acc tcc tgg aca gac ccc aag ctc aac agc ccc atg tac ttc ttc ctc Thr Ser Trp Thr Asp Pro Lys Leu Asn Ser Pro Met Tyr Phe Phe Leu 50 55 60			192
ggc cat ctg tct ctc ctg gat gtc tgc ttc atc acc act acc atc cca Gly His Leu Ser Leu Leu Asp Val Cys Phe Ile Thr Thr Thr Ile Pro 65 70 75 80			240
cag atg ttg atc cac ctc gtg gtc agg gac cac att gtc tcc ttt gta Gln Met Leu Ile His Leu Val Val Arg Asp His Ile Val Ser Phe Val 85 90 95			288
tgt tgc atg acc cag atg tac ttt gtc ttc tgt gtt ggt gtg gcc gag Cys Cys Met Thr Gln Met Tyr Phe Val Phe Cys Val Gly Val Ala Glu 100 105 110			336
tgc atc ctc ttg gct ttc atg gcc tat gac cgt tat gtt gct atc tgc Cys Ile Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys 115 120 125			384
tac cca ctt aac tat gtc ccg atc ata agc cag aag gtc tgt gtc agg Tyr Pro Leu Asn Tyr Val Pro Ile Ile Ser Gln Lys Val Cys Val Arg 130 135 140			432
ctt gtg gga act gcc tgg ttc ttt ggg ctg atc aat ggc atc ttt ctc Leu Val Gly Thr Ala Trp Phe Phe Gly Leu Ile Asn Gly Ile Phe Leu 145 150 155 160			480
gag tat att tca ttc cga gag ccc ttc cgc aga gac aac cac ata gaa Glu Tyr Ile Ser Phe Arg Glu Pro Phe Arg Arg Asp Asn His Ile Glu 165 170 175			528
agc ttc ttc tgt gag gcc ccc ata gtg att ggc ctc tct tgt ggg gac Ser Phe Phe Cys Glu Ala Pro Ile Val Ile Gly Leu Ser Cys Gly Asp 180 185 190			576
cct cag ttt agt ctg tgg gca atc ttt gcc gat gcc atc gtg gta att Pro Gln Phe Ser Leu Trp Ala Ile Phe Ala Asp Ala Ile Val Val Ile 195 200 205			624
ctc agc ccc atg gtg ctc act gtc act tcc tat gtg cac atc ctg gcc Leu Ser Pro Met Val Leu Thr Val Thr Ser Tyr Val His Ile Leu Ala 210 215 220			672
acc atc ctc agc aaa gcc tcc tcc tca ggt cgg ggg aag act ttc tct Thr Ile Leu Ser Lys Ala Ser Ser Ser Gly Arg Gly Lys Thr Phe Ser 225 230 235 240			720
act tgt gcc tct cac ctg act gtg gtc atc ttt ctc tac act tca gct Thr Cys Ala Ser His Leu Thr Val Val Ile Phe Leu Tyr Thr Ser Ala 245 250 255			768
atg ttc tct tac atg aac ccc cac agc aca cat ggg cct gac aaa gac Met Phe Ser Tyr Met Asn Pro His Ser Thr His Gly Pro Asp Lys Asp 260 265 270			816

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Glu Tyr Ile Ser Phe Arg Glu Pro Phe Arg Arg Asp Asn His Ile Glu
 165 170 175

Ser Phe Phe Cys Glu Ala Pro Ile Val Ile Gly Leu Ser Cys Gly Asp
 180 185 190

Pro Gln Phe Ser Leu Trp Ala Ile Phe Ala Asp Ala Ile Val Val Ile
 195 200 205

Leu Ser Pro Met Val Leu Thr Val Thr Ser Tyr Val His Ile Leu Ala
 210 215 220

Thr Ile Leu Ser Lys Ala Ser Ser Ser Gly Arg Gly Lys Thr Phe Ser
 225 230 235 240

Thr Cys Ala Ser His Leu Thr Val Val Ile Phe Leu Tyr Thr Ser Ala
 245 250 255

Met Phe Ser Tyr Met Asn Pro His Ser Thr His Gly Pro Asp Lys Asp
 260 265 270

Lys Pro Phe Ser Leu Leu Tyr Thr Ile Ile Thr Pro Met Cys Asn Pro
 275 280 285

Ile Ile Tyr Ser Phe Arg Asn Lys Glu Ile Lys Glu Ala Met Val Arg
 290 295 300

Ala Leu Gly Arg Thr Arg Leu Ala Gln Pro Gln Ser Val
 305 310 315

<210> 79
 <211> 933
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(930)
 <223>

<400> 79
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 Met Gln Leu Asn Asn Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15

cag gat cct ttt tgg aag aaa ata gtg ttt gtt att ttt ttg cgt ctc
 Gln Asp Pro Phe Trp Lys Lys Ile Val Phe Val Ile Phe Leu Arg Leu
 20 25 30

tac ttg gga aca ctg ttg ggt aat ttg cta atc att att agt gtc aag

48

96

144

Tyr	Leu	Gly	Thr	Leu	Leu	Gly	Asn	Leu	Leu	Ile	Ile	Ile	Ser	Val	Lys	
		35					40					45				
gcc	agc	cag	gca	ctt	aag	aac	cca	atg	ttc	ttc	ttc	ctt	ttc	tac	tta	192
Ala	Ser	Gln	Ala	Leu	Lys	Asn	Pro	Met	Phe	Phe	Phe	Leu	Phe	Tyr	Leu	
	50					55					60					
tct	tta	tct	gat	act	tgc	ctc	tct	act	tcc	ata	gcc	cct	aga	atg	att	240
Ser	Leu	Ser	Asp	Thr	Cys	Leu	Ser	Thr	Ser	Ile	Ala	Pro	Arg	Met	Ile	
65					70					75					80	
gtg	gat	gcc	ctt	ttg	aag	aag	aca	act	atc	tcc	ttc	agc	gag	tgc	atg	288
Val	Asp	Ala	Leu	Leu	Lys	Lys	Thr	Thr	Ile	Ser	Phe	Ser	Glu	Cys	Met	
				85					90					95		
atc	caa	gtc	ttt	tca	tcc	cat	gtc	ttt	ggc	tgc	ctg	gag	atc	ttc	atc	336
Ile	Gln	Val	Phe	Ser	Ser	His	Val	Phe	Gly	Cys	Leu	Glu	Ile	Phe	Ile	
			100					105					110			
ctc	atc	ctc	acg	gct	gtt	gac	cgc	tat	gtg	gac	atc	tgt	aag	ccc	ctg	384
Leu	Ile	Leu	Thr	Ala	Val	Asp	Arg	Tyr	Val	Asp	Ile	Cys	Lys	Pro	Leu	
		115					120					125				
cac	tac	atg	acc	atc	ata	agc	cag	tgg	gtc	tgt	ggg	gtt	ttg	atg	gct	432
His	Tyr	Met	Thr	Ile	Ile	Ser	Gln	Trp	Val	Cys	Gly	Val	Leu	Met	Ala	
	130						135				140					
gtg	gcc	tgg	gtg	gga	tcc	tgt	gtg	cat	tct	tta	gtt	cag	att	ttt	ctt	480
Val	Ala	Trp	Val	Gly	Ser	Cys	Val	His	Ser	Leu	Val	Gln	Ile	Phe	Leu	
145					150					155					160	
gcc	ctg	agt	ttg	cca	ttc	tgt	ggc	ccc	aat	gtg	atc	aat	cac	tgt	ttc	528
Ala	Leu	Ser	Leu	Pro	Phe	Cys	Gly	Pro	Asn	Val	Ile	Asn	His	Cys	Phe	
				165					170					175		
tgt	gac	ttg	cag	ccc	ttg	ttg	aaa	caa	gcc	tgt	tca	gaa	acc	tat	gtg	576
Cys	Asp	Leu	Gln	Pro	Leu	Leu	Lys	Gln	Ala	Cys	Ser	Glu	Thr	Tyr	Val	
			180					185					190			
gtt	aac	cta	ctc	ctg	gtt	tcc	aat	agt	ggg	gcc	att	tgt	gca	gtg	agt	624
Val	Asn	Leu	Leu	Leu	Val	Ser	Asn	Ser	Gly	Ala	Ile	Cys	Ala	Val	Ser	
		195					200					205				
tat	gtc	atg	cta	ata	ttc	tcc	tat	gtc	atc	ttc	ttg	cat	tct	ctg	aga	672
Tyr	Val	Met	Leu	Ile	Phe	Ser	Tyr	Val	Ile	Phe	Leu	His	Ser	Leu	Arg	
	210					215					220					
aac	cac	agt	gct	gaa	gtg	ata	aag	aaa	gca	ctt	tcc	aca	tgt	gtc	tcc	720
Asn	His	Ser	Ala	Glu	Val	Ile	Lys	Lys	Ala	Leu	Ser	Thr	Cys	Val	Ser	
225					230					235					240	
cac	atc	att	gtg	gtc	atc	ttg	ttc	ttt	gga	cct	tgc	ata	ttt	atg	tac	768
His	Ile	Ile	Val	Val	Ile	Leu	Phe	Phe	Gly	Pro	Cys	Ile	Phe	Met	Tyr	
				245					250					255		
aca	tgc	cct	gca	acc	gta	ttc	ccc	atg	gat	aag	atg	ata	gct	gta	ttt	816
Thr	Cys	Pro	Ala	Thr	Val	Phe	Pro	Met	Asp	Lys	Met	Ile	Ala	Val	Phe	
			260					265					270			
tat	aca	gtt	gga	aca	tct	ttt	ctc	aac	cct	gtg	att	tac	acg	ctg	aag	864
Tyr	Thr	Val	Gly	Thr	Ser	Phe	Leu	Asn	Pro	Val	Ile	Tyr	Thr	Leu	Lys	

atc aca gat gac aaa aga taa
Ile Thr Asp Asp Lys Arg
305 310

<400> 80

Met Gln Leu Asn Asn Asn Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
1 5 10 15

Gln Asp Pro Phe Trp Lys Lys Ile Val Phe Val Ile Phe Leu Arg Leu
20 25 30

Tyr Leu Gly Thr Leu Leu Gly Asn Leu Leu Ile Ile Ile Ser Val Lys
35 40 45

Ala Ser Gln Ala Leu Lys Asn Pro Met Phe Phe Phe Leu Phe Tyr Leu
50 55 60

Ser Leu Ser Asp Thr Cys Leu Ser Thr Ser Ile Ala Pro Arg Met Ile
65 70 75 80

Val Asp Ala Leu Leu Lys Lys Thr Thr Ile Ser Phe Ser Glu Cys Met
85 90 95

Ile Gln Val Phe Ser Ser His Val Phe Gly Cys Leu Glu Ile Phe Ile
100 105 110

Leu Ile Leu Thr Ala Val Asp Arg Tyr Val Asp Ile Cys Lys Pro Leu
115 120 125

His Tyr Met Thr Ile Ile Ser Gln Trp Val Cys Gly Val Leu Met Ala
130 135 140

Val Ala Trp Val Gly Ser Cys Val His Ser Leu Val Gln Ile Phe Leu
145 150 155 160

Ala Leu Ser Leu Pro Phe Cys Gly Pro Asn Val Ile Asn His Cys Phe
165 170 175

Cys Asp Leu Gln Pro Leu Leu Lys Gln Ala Cys Ser Glu Thr Tyr Val
180 185 190

Val Asn Leu Leu Leu Val Ser Asn Ser Gly Ala Ile Cys Ala Val Ser
195 200 205

Tyr Val Met Leu Ile Phe Ser Tyr Val Ile Phe Leu His Ser Leu Arg
210 215 220

Asn His Ser Ala Glu Val Ile Lys Lys Ala Leu Ser Thr Cys Val Ser
225 230 235 240

His Ile Ile Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe Met Tyr
245 250 255

Thr Cys Pro Ala Thr Val Phe Pro Met Asp Lys Met Ile Ala Val Phe
260 265 270

Tyr Thr Val Gly Thr Ser Phe Leu Asn Pro Val Ile Tyr Thr Leu Lys
275 280 285

Asn Thr Glu Val Lys Ser Ala Met Arg Lys Leu Trp Ser Lys Lys Leu
290 295 300

Ile Thr Asp Asp Lys Arg
305 310

<210> 81
<211> 960
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(957)
<223>

<400> 81
atg ttc tat cta cac tgg acc atg gaa aaa agc aat aat agc act ttg 48
Met Phe Tyr Leu His Trp Thr Met Glu Lys Ser Asn Asn Ser Thr Leu
1 5 10 15
ttt att ctc ttg ggg ttt tcc caa aat aag aac att gaa gtc ctc tgc 96
Phe Ile Leu Leu Gly Phe Ser Gln Asn Lys Asn Ile Glu Val Leu Cys
20 25 30
ttt gta tta ttt ttg ttt tgc tac att gct att tgg atg gga aac tta 144
Phe Val Leu Phe Leu Phe Cys Tyr Ile Ala Ile Trp Met Gly Asn Leu
35 40 45

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ctc ata atg att tct atc acg tgc acc cag ctc att cac caa ccc atg 192
 Leu Ile Met Ile Ser Ile Thr Cys Thr Gln Leu Ile His Gln Pro Met
 50 55 60

tat ttc ttc ctc aat tac ctc tca ctc tcc gac ctt tgc tac aca tcc 240
 Tyr Phe Phe Leu Asn Tyr Leu Ser Leu Ser Asp Leu Cys Tyr Thr Ser
 65 70 75 80

aca gtg acc ccc aaa tta atg gtt gac tta ctg gca gaa aga aag acc 288
 Thr Val Thr Pro Lys Leu Met Val Asp Leu Leu Ala Glu Arg Lys Thr
 85 90 95

att tcc tat aat aac tgt atg ata caa ctc ttt acc acc cat ttt ttt 336
 Ile Ser Tyr Asn Asn Cys Met Ile Gln Leu Phe Thr Thr His Phe Phe
 100 105 110

gga ggc ata gag atc ttc att ctc aca ggg atg gcc tat gac cgc tat 384
 Gly Gly Ile Glu Ile Phe Ile Leu Thr Gly Met Ala Tyr Asp Arg Tyr
 115 120 125

gtg gcc att tgc aag ccc ctg cac tac acc att att atg agc agg caa 432
 Val Ala Ile Cys Lys Pro Leu His Tyr Thr Ile Ile Met Ser Arg Gln
 130 135 140

aag tgt aac aca atc atc ata gtt tgt tgt act ggg gga ttt ata cat 480
 Lys Cys Asn Thr Ile Ile Ile Val Cys Cys Thr Gly Gly Phe Ile His
 145 150 155 160

tct gcc agt cag ttt ctt ctc acc atc ttt gta cca ttt tgt ggc cca 528
 Ser Ala Ser Gln Phe Leu Leu Thr Ile Phe Val Pro Phe Cys Gly Pro
 165 170 175

aat gag ata gat cac tac ttc tgt gat gtg tat cct ttg ctg aaa ttg 576
 Asn Glu Ile Asp His Tyr Phe Cys Asp Val Tyr Pro Leu Leu Lys Leu
 180 185 190

gcc tgt tct aat ata cac atg ata ggt ctc tta gtc att gct aat tca 624
 Ala Cys Ser Asn Ile His Met Ile Gly Leu Leu Val Ile Ala Asn Ser
 195 200 205

ggc tta att gct ttg gtg aca ttt gtt gtc ttg ttg ttg tct tat gtt 672
 Gly Leu Ile Ala Leu Val Thr Phe Val Val Leu Leu Ser Tyr Val
 210 215 220

ttt ata ttg tat acc atc aga gca tac tct gca gag aga cgc agc aaa 720
 Phe Ile Leu Tyr Thr Ile Arg Ala Tyr Ser Ala Glu Arg Arg Ser Lys
 225 230 235 240

gct ctt gcc act tgt agt tct cat gta att gtt gtg gtc ctg ttt ttt 768
 Ala Leu Ala Thr Cys Ser Ser His Val Ile Val Val Val Leu Phe Phe
 245 250 255

gct cct gca ttg ttc att tac att aga ccg gtc aca aca ttc tca gaa 816
 Ala Pro Ala Leu Phe Ile Tyr Ile Arg Pro Val Thr Thr Phe Ser Glu
 260 265 270

gat aaa gtg ttt gcc ctt ttt tat acc atc att gct ccc atg ttc aac 864
 Asp Lys Val Phe Ala Leu Phe Tyr Thr Ile Ile Ala Pro Met Phe Asn
 275 280 285

cct ctc ata tac acg ctg aga aac aca gag atg aag aac gcc atg agg 912

Pro Leu Ile Tyr Thr Leu Arg Asn Thr Glu Met Lys Asn Ala Met Arg
 290 295 300

aaa gtg tgg tgt tgt caa ata ctc ctg aaa aga aat caa ctt ttc tga 960
 Lys Val Trp Cys Cys Gln Ile Leu Leu Lys Arg Asn Gln Leu Phe
 305 310 315

<210> 82

<211> 319

<212> PRT

<213> Homo Sapiens

<400> 82

Met Phe Tyr Leu His Trp Thr Met Glu Lys Ser Asn Asn Ser Thr Leu
 1 5 10 15

Phe Ile Leu Leu Gly Phe Ser Gln Asn Lys Asn Ile Glu Val Leu Cys
 20 25 30

Phe Val Leu Phe Leu Phe Cys Tyr Ile Ala Ile Trp Met Gly Asn Leu
 35 40 45

Leu Ile Met Ile Ser Ile Thr Cys Thr Gln Leu Ile His Gln Pro Met
 50 55 60

Tyr Phe Phe Leu Asn Tyr Leu Ser Leu Ser Asp Leu Cys Tyr Thr Ser
 65 70 75 80

Thr Val Thr Pro Lys Leu Met Val Asp Leu Leu Ala Glu Arg Lys Thr
 85 90 95

Ile Ser Tyr Asn Asn Cys Met Ile Gln Leu Phe Thr Thr His Phe Phe
 100 105 110

Gly Gly Ile Glu Ile Phe Ile Leu Thr Gly Met Ala Tyr Asp Arg Tyr
 115 120 125

Val Ala Ile Cys Lys Pro Leu His Tyr Thr Ile Ile Met Ser Arg Gln
 130 135 140

Lys Cys Asn Thr Ile Ile Ile Val Cys Cys Thr Gly Gly Phe Ile His
 145 150 155 160

Ser Ala Ser Gln Phe Leu Leu Thr Ile Phe Val Pro Phe Cys Gly Pro
 165 170 175

Asn Glu Ile Asp His Tyr Phe Cys Asp Val Tyr Pro Leu Leu Lys Leu
 180 185 190

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Ala Cys Ser Asn Ile His Met Ile Gly Leu Leu Val Ile Ala Asn Ser
 195 200 205

Gly Leu Ile Ala Leu Val Thr Phe Val Val Leu Leu Leu Ser Tyr Val
 210 215 220

Phe Ile Leu Tyr Thr Ile Arg Ala Tyr Ser Ala Glu Arg Arg Ser Lys
 225 230 235 240

Ala Leu Ala Thr Cys Ser Ser His Val Ile Val Val Val Leu Phe Phe
 245 250 255

Ala Pro Ala Leu Phe Ile Tyr Ile Arg Pro Val Thr Thr Phe Ser Glu
 260 265 270

Asp Lys Val Phe Ala Leu Phe Tyr Thr Ile Ile Ala Pro Met Phe Asn
 275 280 285

Pro Leu Ile Tyr Thr Leu Arg Asn Thr Glu Met Lys Asn Ala Met Arg
 290 295 300

Lys Val Trp Cys Cys Gln Ile Leu Leu Lys Arg Asn Gln Leu Phe
 305 310 315

<210> 83
 <211> 990
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(987)
 <223>

<400> 83 48
 atg atc cct gtt gga gct ttc atc ttt tcc ttg gga aac atg caa aac
 Met Ile Pro Val Gly Ala Phe Ile Phe Ser Leu Gly Asn Met Gln Asn
 1 5 10 15

caa agc ttt gta act gag ttt gtc ctc ctg gga ctt tca cag aat cca 96
 Gln Ser Phe Val Thr Glu Phe Val Leu Leu Gly Leu Ser Gln Asn Pro
 20 25 30

aat gtt cag gaa ata gta ttt gtt gta ttt ttg ttt gtc tac att gca 144
 Asn Val Gln Glu Ile Val Phe Val Val Phe Leu Phe Val Tyr Ile Ala
 35 40 45

act gtt ggg ggc aac atg cta att gta gta acc att ctc agc agc cct 192
 Thr Val Gly Gly Asn Met Leu Ile Val Val Thr Ile Leu Ser Ser Pro
 50 55 60

gct ctt ctg gtg tct cct atg tac ttc ttc ttg ggc ttc ctg tcc ttc	240
Ala Leu Leu Val Ser Pro Met Tyr Phe Phe Leu Gly Phe Leu Ser Phe	
65 70 75 80	
ctg gat gcg tgc ttc tca tct gtc atc acc cca aag atg att gta gac	288
Leu Asp Ala Cys Phe Ser Ser Val Ile Thr Pro Lys Met Ile Val Asp	
85 90 95	
tcc ctc tat gtg aca aaa acc atc tct ttt gaa ggc tgc atg atg cag	336
Ser Leu Tyr Val Thr Lys Thr Ile Ser Phe Glu Gly Cys Met Met Gln	
100 105 110	
ctc ttt gct gaa cac ttc ttt gct ggg gtg gag gtg att gtc ctc aca	384
Leu Phe Ala Glu His Phe Phe Ala Gly Val Glu Val Ile Val Leu Thr	
115 120 125	
gcc atg gcc tat gat cgt tat gtg gcc att tgc aag ccc ttg cat tac	432
Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Tyr	
130 135 140	
tct tct atc atg aac agg agg ctc tgt ggc att ctg atg ggg gta gcc	480
Ser Ser Ile Met Asn Arg Arg Leu Cys Gly Ile Leu Met Gly Val Ala	
145 150 155 160	
tgg aca ggg ggc ctc ttg cat tcc atg ata caa att ctt ttt act ttc	528
Trp Thr Gly Gly Leu Leu His Ser Met Ile Gln Ile Leu Phe Thr Phe	
165 170 175	
cag ctt ccc ttt tgt ggc ccc aat gtc atc aat cac ttt atg tgt gac	576
Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asn His Phe Met Cys Asp	
180 185 190	
ttg tac ccg tta ctg gag ctt gcc tgc act gat act cac atc ttt ggc	624
Leu Tyr Pro Leu Leu Glu Leu Ala Cys Thr Asp Thr His Ile Phe Gly	
195 200 205	
ctc atg gtg gtc atc aac agt ggg ttt atc tgc atc ata aac ttc tcc	672
Leu Met Val Val Ile Asn Ser Gly Phe Ile Cys Ile Ile Asn Phe Ser	
210 215 220	
ttg ttg ctt gtc tcc tat gct gtc atc ttg ctc tct ctg aga aca cac	720
Leu Leu Leu Val Ser Tyr Ala Val Ile Leu Leu Ser Leu Arg Thr His	
225 230 235 240	
agt tct gaa ggg cgc tgg aaa gct ctc tcc acc tgt gga tct cac att	768
Ser Ser Glu Gly Arg Trp Lys Ala Leu Ser Thr Cys Gly Ser His Ile	
245 250 255	
gct gtt gtg att ttg ttc ttt gtc cca tgc ata ttt gta tat aca cga	816
Ala Val Val Ile Leu Phe Phe Val Pro Cys Ile Phe Val Tyr Thr Arg	
260 265 270	
cct cca tct gct ttt tcc ctt gac aaa atg gcg gca ata ttt tat atc	864
Pro Pro Ser Ala Phe Ser Leu Asp Lys Met Ala Ala Ile Phe Tyr Ile	
275 280 285	
atc tta aat ccc ttg ctc aat cct ttg att tac act ttc agg aat aag	912
Ile Leu Asn Pro Leu Leu Asn Pro Leu Ile Tyr Thr Phe Arg Asn Lys	
290 295 300	

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gaa gta aaa cag gcc atg agg aga ata tgg aac aga ctg atg gtg gtt 960
 Glu Val Lys Gln Ala Met Arg Arg Ile Trp Asn Arg Leu Met Val Val
 305 310 315 320

tct gat gag aaa gaa aat att aaa ctt taa 990
 Ser Asp Glu Lys Glu Asn Ile Lys Leu
 325

<210> 84
 <211> 329
 <212> PRT
 <213> Homo Sapiens

<400> 84

Met Ile Pro Val Gly Ala Phe Ile Phe Ser Leu Gly Asn Met Gln Asn
 1 5 10 15

Gln Ser Phe Val Thr Glu Phe Val Leu Leu Gly Leu Ser Gln Asn Pro
 20 25 30

Asn Val Gln Glu Ile Val Phe Val Val Phe Leu Phe Val Tyr Ile Ala
 35 40 45

Thr Val Gly Gly Asn Met Leu Ile Val Val Thr Ile Leu Ser Ser Pro
 50 55 60

Ala Leu Leu Val Ser Pro Met Tyr Phe Phe Leu Gly Phe Leu Ser Phe
 65 70 75 80

Leu Asp Ala Cys Phe Ser Ser Val Ile Thr Pro Lys Met Ile Val Asp
 85 90 95

Ser Leu Tyr Val Thr Lys Thr Ile Ser Phe Glu Gly Cys Met Met Gln
 100 105 110

Leu Phe Ala Glu His Phe Phe Ala Gly Val Glu Val Ile Val Leu Thr
 115 120 125

Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Tyr
 130 135 140

Ser Ser Ile Met Asn Arg Arg Leu Cys Gly Ile Leu Met Gly Val Ala
 145 150 155 160

Trp Thr Gly Gly Leu Leu His Ser Met Ile Gln Ile Leu Phe Thr Phe
 165 170 175

Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asn His Phe Met Cys Asp

	180		185		190
Leu Tyr Pro Leu Leu Glu Leu Ala Cys Thr Asp Thr His Ile Phe Gly					
195		200		205	
Leu Met Val Val Ile Asn Ser Gly Phe Ile Cys Ile Ile Asn Phe Ser					
210		215		220	
Leu Leu Leu Val Ser Tyr Ala Val Ile Leu Leu Ser Leu Arg Thr His					
225		230		235	240
Ser Ser Glu Gly Arg Trp Lys Ala Leu Ser Thr Cys Gly Ser His Ile					
	245		250		255
Ala Val Val Ile Leu Phe Phe Val Pro Cys Ile Phe Val Tyr Thr Arg					
	260		265		270
Pro Pro Ser Ala Phe Ser Leu Asp Lys Met Ala Ala Ile Phe Tyr Ile					
	275		280		285
Ile Leu Asn Pro Leu Leu Asn Pro Leu Ile Tyr Thr Phe Arg Asn Lys					
	290		295		300
Glu Val Lys Gln Ala Met Arg Arg Ile Trp Asn Arg Leu Met Val Val					
305		310		315	320
Ser Asp Glu Lys Glu Asn Ile Lys Leu					
	325				

<210> 85
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

<400> 85	
atg aga aga aac tgc acg ttg gtg act gag ttc att ctc ctg gga ctg	48
Met Arg Arg Asn Cys Thr Leu Val Thr Glu Phe Ile Leu Leu Gly Leu	
1 5 10 15	
acc agt cgc cgg gaa tta caa att ctc ctc ttc acg ctg ttt ctg gcc	96
Thr Ser Arg Arg Glu Leu Gln Ile Leu Leu Phe Thr Leu Phe Leu Ala	
20 25 30	
att tac atg gtc acg gtg gca ggg aac ctt ggc atg att gtc ctc atc	144
Ile Tyr Met Val Thr Val Ala Gly Asn Leu Gly Met Ile Val Leu Ile	

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35	40	45	
cag gcc aac gcc tgg ctc	cac atg ccc atg tac ttt ttc ctg agc cac		192
Gln Ala Asn Ala Trp Leu	His Met Pro Met Tyr Phe Phe Leu Ser His		
50	55	60	
tta tcc ttc gtg gat ctg tgc ttc tct tcc aat gtg act cca aag atg			240
Leu Ser Phe Val Asp Leu Cys Phe Ser Ser Asn Val Thr Pro Lys Met			
65	70	75	80
ctg gag att ttc ctt tca gag aag aaa agc att tcc tat cct gcc tgt			288
Leu Glu Ile Phe Leu Ser Glu Lys Lys Ser Ile Ser Tyr Pro Ala Cys			
	85	90	95
ctt gtg cag tgt tac ctt ttt atc gcc ttg gtc cat gtt gag atc tac			336
Leu Val Gln Cys Tyr Leu Phe Ile Ala Leu Val His Val Glu Ile Tyr			
	100	105	110
atc ctg gct gtg atg gcc ttt gac cgg tac atg gcc atc tgc aac cct			384
Ile Leu Ala Val Met Ala Phe Asp Arg Tyr Met Ala Ile Cys Asn Pro			
	115	120	125
ctg ctt tat ggc agc aga atg tcc aag agt gtg tgc tcc ttc ctc atc			432
Leu Leu Tyr Gly Ser Arg Met Ser Lys Ser Val Cys Ser Phe Leu Ile			
	130	135	140
acg gtg cct tat gtg tat gga gcg ctc act ggc ctg atg gag acc atg			480
Thr Val Pro Tyr Val Tyr Gly Ala Leu Thr Gly Leu Met Glu Thr Met			
	145	150	155
tgg acc tac aac cta gcc ttc tgt ggc ccc aat gaa att aat cac ttc			528
Trp Thr Tyr Asn Leu Ala Phe Cys Gly Pro Asn Glu Ile Asn His Phe			
	165	170	175
tac tgt gcg gac cca cca ctg att aag ctg gct tgt tct gac acc tac			576
Tyr Cys Ala Asp Pro Pro Leu Ile Lys Leu Ala Cys Ser Asp Thr Tyr			
	180	185	190
aac aag gag ttg tca atg ttt att gtg gct ggc tgg aac ctt tct ttt			624
Asn Lys Glu Leu Ser Met Phe Ile Val Ala Gly Trp Asn Leu Ser Phe			
	195	200	205
tct ctc ttc atc ata tgt att tcc tac ctt tac att ttc cct gct att			672
Ser Leu Phe Ile Ile Cys Ile Ser Tyr Leu Tyr Ile Phe Pro Ala Ile			
	210	215	220
tta aag att cgc tct aca gag ggc agg caa aaa gct ttt tct acc tgt			720
Leu Lys Ile Arg Ser Thr Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys			
	225	230	235
ggc tcc cat ctg aca gct gtc act ata ttc tat gca acc ctt ttc ttc			768
Gly Ser His Leu Thr Ala Val Thr Ile Phe Tyr Ala Thr Leu Phe Phe			
	245	250	255
atg tat ctc aga ccc ccc tca aag gaa tct gtt gaa cag ggt aaa atg			816
Met Tyr Leu Arg Pro Pro Ser Lys Glu Ser Val Glu Gln Gly Lys Met			
	260	265	270
gta gct gta ttt tat acc aca gta atc cct atg ctg aac ctt ata att			864
Val Ala Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Leu Ile Ile			
	275	280	285

tat agc ctt aga aat aaa aat gta aaa gaa gca tta atc aaa gag ctg 912
 Tyr Ser Leu Arg Asn Lys Asn Val Lys Glu Ala Leu Ile Lys Glu Leu
 290 295 300

tca atg aag ata tac ttt tct taa 936
 Ser Met Lys Ile Tyr Phe Ser
 305 310

<210> 86
 <211> 311
 <212> PRT
 <213> Homo Sapiens

<400> 86

Met Arg Arg Asn Cys Thr Leu Val Thr Glu Phe Ile Leu Leu Gly Leu
 1 5 10 15

Thr Ser Arg Arg Glu Leu Gln Ile Leu Leu Phe Thr Leu Phe Leu Ala
 20 25 30

Ile Tyr Met Val Thr Val Ala Gly Asn Leu Gly Met Ile Val Leu Ile
 35 40 45

Gln Ala Asn Ala Trp Leu His Met Pro Met Tyr Phe Phe Leu Ser His
 50 55 60

Leu Ser Phe Val Asp Leu Cys Phe Ser Ser Asn Val Thr Pro Lys Met
 65 70 75 80

Leu Glu Ile Phe Leu Ser Glu Lys Lys Ser Ile Ser Tyr Pro Ala Cys
 85 90 95

Leu Val Gln Cys Tyr Leu Phe Ile Ala Leu Val His Val Glu Ile Tyr
 100 105 110

Ile Leu Ala Val Met Ala Phe Asp Arg Tyr Met Ala Ile Cys Asn Pro
 115 120 125

Leu Leu Tyr Gly Ser Arg Met Ser Lys Ser Val Cys Ser Phe Leu Ile
 130 135 140

Thr Val Pro Tyr Val Tyr Gly Ala Leu Thr Gly Leu Met Glu Thr Met
 145 150 155 160

Trp Thr Tyr Asn Leu Ala Phe Cys Gly Pro Asn Glu Ile Asn His Phe
 165 170 175

Val	Ser	Pro	Gln	Leu	Asn	Asn	Pro	Met	Tyr	Phe	Phe	Leu	Ser	His	Leu	
50						55					60					
tca	ttt	gtt	gat	gtg	tgg	ttt	tct	tcc	aat	gtc	acc	cct	aaa	atg	ttg	240
Ser	Phe	Val	Asp	Val	Trp	Phe	Ser	Ser	Asn	Val	Thr	Pro	Lys	Met	Leu	
65					70				75					80		
gaa	aac	ctg	ttt	tca	gat	aaa	aaa	aca	att	act	tat	gct	ggg	tgt	tta	288
Glu	Asn	Leu	Phe	Ser	Asp	Lys	Lys	Thr	Ile	Thr	Tyr	Ala	Gly	Cys	Leu	
				85					90					95		
gta	cag	tgt	ttc	ttc	ttc	att	gct	ctt	gtc	cat	gtg	gaa	att	ttt	att	336
Val	Gln	Cys	Phe	Phe	Phe	Ile	Ala	Leu	Val	His	Val	Glu	Ile	Phe	Ile	
			100					105					110			
ctt	gct	gcg	atg	gcc	ttt	gat	aga	tac	atg	gca	att	ggg	aat	cct	ctg	384
Leu	Ala	Ala	Met	Ala	Phe	Asp	Arg	Tyr	Met	Ala	Ile	Gly	Asn	Pro	Leu	
			115				120					125				
ctt	tat	ggc	agt	aaa	atg	tca	agg	gtt	gtc	tgt	att	cga	ctg	att	act	432
Leu	Tyr	Gly	Ser	Lys	Met	Ser	Arg	Val	Val	Cys	Ile	Arg	Leu	Ile	Thr	
	130					135					140					
ttc	cct	tac	att	tat	ggt	ttt	ctg	acg	agt	ctg	gca	gca	aca	tta	tgg	480
Phe	Pro	Tyr	Ile	Tyr	Gly	Phe	Leu	Thr	Ser	Leu	Ala	Ala	Thr	Leu	Trp	
145					150					155					160	
act	tac	ggc	ttg	tac	ttc	tgt	gga	aaa	att	gag	atc	aac	cat	ttc	tac	528
Thr	Tyr	Gly	Leu	Tyr	Phe	Cys	Gly	Lys	Ile	Glu	Ile	Asn	His	Phe	Tyr	
				165					170					175		
tgt	gca	gat	cca	cct	ctc	atc	aaa	atg	gcc	tgt	gcc	ggg	acc	ttt	gta	576
Cys	Ala	Asp	Pro	Pro	Leu	Ile	Lys	Met	Ala	Cys	Ala	Gly	Thr	Phe	Val	
			180					185					190			
aaa	gaa	tat	aca	atg	atc	ata	ctt	gcc	ggc	att	aac	ttc	aca	tat	tcc	624
Lys	Glu	Tyr	Thr	Met	Ile	Ile	Leu	Ala	Gly	Ile	Asn	Phe	Thr	Tyr	Ser	
		195					200					205				
ctg	act	gta	att	atc	atc	tct	tac	tta	ttc	atc	ctc	att	gcc	att	ctg	672
Leu	Thr	Val	Ile	Ile	Ile	Ser	Tyr	Leu	Phe	Ile	Leu	Ile	Ala	Ile	Leu	
		210				215					220					
cga	atg	cgc	tca	gca	gaa	gga	agg	cag	aag	gcc	ttt	tcc	aca	tgt	ggg	720
Arg	Met	Arg	Ser	Ala	Glu	Gly	Arg	Gln	Lys	Ala	Phe	Ser	Thr	Cys	Gly	
225					230					235					240	
tcc	cat	ctg	aca	gct	gtc	att	ata	ttc	tat	ggt	act	ctg	atc	ttc	atg	768
Ser	His	Leu	Thr	Ala	Val	Ile	Ile	Phe	Tyr	Gly	Thr	Leu	Ile	Phe	Met	
				245					250					255		
tat	ctc	aga	cgt	ccc	aca	gag	gag	tct	gtg	gag	cag	ggg	aag	atg	gtg	816
Tyr	Leu	Arg	Arg	Pro	Thr	Glu	Glu	Ser	Val	Glu	Gln	Gly	Lys	Met	Val	
			260					265					270			
gct	gtg	ttc	tat	acc	aca	gtg	atc	ccc	atg	ttg	aat	ccc	atg	atc	tac	864
Ala	Val	Phe	Tyr	Thr	Thr	Val	Ile	Pro	Met	Leu	Asn	Pro	Met	Ile	Tyr	
		275					280					285				
agt	ctg	agg	aac	aag	gat	gtg	aaa	aag	gcc	atg	atg	aaa	gtg	atc	agc	912
Ser	Leu	Arg	Asn	Lys	Asp	Val	Lys	Lys	Ala	Met	Met	Lys	Val	Ile	Ser	

132

Lys Glu Tyr Thr Met Ile Ile Leu Ala Gly Ile Asn Phe Thr Tyr Ser
195 200 205

Leu Thr Val Ile Ile Ile Ser Tyr Leu Phe Ile Leu Ile Ala Ile Leu
210 215 220

Arg Met Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Gly
225 230 235 240

Ser His Leu Thr Ala Val Ile Ile Phe Tyr Gly Thr Leu Ile Phe Met
245 250 255

Tyr Leu Arg Arg Pro Thr Glu Glu Ser Val Glu Gln Gly Lys Met Val
260 265 270

Ala Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Met Ile Tyr
275 280 285

Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Met Met Lys Val Ile Ser
290 295 300

Arg Ser Cys
305

<210> 89
<211> 918
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1) .. (915)
<223>

<400> 89
atg tcc aac aca aat ggc agt gca atc aca gaa ttc att tta ctt ggg 48
Met Ser Asn Thr Asn Gly Ser Ala Ile Thr Glu Phe Ile Leu Leu Gly
1 5 10 15
ctc aca gat tgc ccg gaa ctc cag tct ctg ctt ttt gtg ctg ttt ctg 96
Leu Thr Asp Cys Pro Glu Leu Gln Ser Leu Leu Phe Val Leu Phe Leu
20 25 30
gtt gtt tac ctc gtc acc ctg cta ggc aac ctg ggc atg ata atg tta 144
Val Val Tyr Leu Val Thr Leu Leu Gly Asn Leu Gly Met Ile Met Leu
35 40 45
atg aga ctg gac tct cgc ctt cac acg ccc atg tac ttc ttc ctc act 192
Met Arg Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Thr
50 55 60

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aac tta gcc ttt gtg gat ttg tgc tat aca tca aat gca acc ccg cag 240
 Asn Leu Ala Phe Val Asp Leu Cys Tyr Thr Ser Asn Ala Thr Pro Gln 80
 65 70 75

atg tcg act aat atc gta tct gag aag acc att tcc ttt gct ggt tgc 288
 Met Ser Thr Asn Ile Val Ser Glu Lys Thr Ile Ser Phe Ala Gly Cys 95
 85 90

ttt aca cag tgc tac att ttc att gcc ctt cta ctc act gag ttt tac 336
 Phe Thr Gln Cys Tyr Ile Phe Ile Ala Leu Leu Leu Thr Glu Phe Tyr 110
 100 105

atg ctg gca gca atg gcc tat gac cgc tat gtg gcc ata tat gac cct 384
 Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Tyr Asp Pro 125
 115 120

ctg cgc tac agt gtg aaa acg tcc agg aga gtt tgc atc tgc ttg gcc 432
 Leu Arg Tyr Ser Val Lys Thr Ser Arg Arg Val Cys Ile Cys Leu Ala 140
 130 135

aca ttt ccc tat gtc tat ggc ttc tca gat gga ctc ttc cag gcc atc 480
 Thr Phe Pro Tyr Val Tyr Gly Phe Ser Asp Gly Leu Phe Gln Ala Ile 160
 145 150 155

ctg acc ttc cgc ctg acc ttc tgt aga tcc aat gtc atc aac cac ttc 528
 Leu Thr Phe Arg Leu Thr Phe Cys Arg Ser Asn Val Ile Asn His Phe 175
 165 170

tac tgt gct gac ccg ccg ctc att aag ctt tct tgt tct gat act tat 576
 Tyr Cys Ala Asp Pro Pro Leu Ile Lys Leu Ser Cys Ser Asp Thr Tyr 190
 180 185

gtc aaa gag cat gcc atg ttc ata tct gct ggc ttc aac ctc tcc agc 624
 Val Lys Glu His Ala Met Phe Ile Ser Ala Gly Phe Asn Leu Ser Ser 205
 195 200

tcc ctc acc atc gtc ttg gtg tcc tat gcc ttc att ctt gct gcc atc 672
 Ser Leu Thr Ile Val Leu Val Ser Tyr Ala Phe Ile Leu Ala Ala Ile 220
 210 215

ctc cgg atc aaa tca gca gag gga agg cac aag gca ttc tcc acc tgt 720
 Leu Arg Ile Lys Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr Cys 240
 225 230 235

ggt tcc cat atg atg gct gtc acc ctg ttt tat ggg act ctc ttt tgc 768
 Gly Ser His Met Met Ala Val Thr Leu Phe Tyr Gly Thr Leu Phe Cys 255
 245 250

atg tat ata aga cca cca aca gat aag act gtt gag gaa tct aaa ata 816
 Met Tyr Ile Arg Pro Pro Thr Asp Lys Thr Val Glu Glu Ser Lys Ile 270
 260 265

ata gct gtc ttt tac acc ttt gtg agt ccg gta ctt aat cca ttg atc 864
 Ile Ala Val Phe Tyr Thr Phe Val Ser Pro Val Leu Asn Pro Leu Ile 285
 275 280

tac agt ctg agg aat aaa gat gtg aag cag gcc ttg aag aat gtc ctg 912
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Gln Ala Leu Lys Asn Val Leu 300
 290 295

aga tga 918

Arg
305

<210> 90
<211> 305
<212> PRT
<213> Homo Sapiens

<400> 90

Met Ser Asn Thr Asn Gly Ser Ala Ile Thr Glu Phe Ile Leu Leu Gly
1 5 10 15

Leu Thr Asp Cys Pro Glu Leu Gln Ser Leu Leu Phe Val Leu Phe Leu
20 25 30

Val Val Tyr Leu Val Thr Leu Leu Gly Asn Leu Gly Met Ile Met Leu
35 40 45

Met Arg Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Thr
50 55 60

Asn Leu Ala Phe Val Asp Leu Cys Tyr Thr Ser Asn Ala Thr Pro Gln
65 70 75 80

Met Ser Thr Asn Ile Val Ser Glu Lys Thr Ile Ser Phe Ala Gly Cys
85 90 95

Phe Thr Gln Cys Tyr Ile Phe Ile Ala Leu Leu Leu Thr Glu Phe Tyr
100 105 110

Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Tyr Asp Pro
115 120 125

Leu Arg Tyr Ser Val Lys Thr Ser Arg Arg Val Cys Ile Cys Leu Ala
130 135 140

Thr Phe Pro Tyr Val Tyr Gly Phe Ser Asp Gly Leu Phe Gln Ala Ile
145 150 155 160

Leu Thr Phe Arg Leu Thr Phe Cys Arg Ser Asn Val Ile Asn His Phe
165 170 175

Tyr Cys Ala Asp Pro Pro Leu Ile Lys Leu Ser Cys Ser Asp Thr Tyr
180 185 190

Val Lys Glu His Ala Met Phe Ile Ser Ala Gly Phe Asn Leu Ser Ser
195 200 205

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Ser Leu Thr Ile Val Leu Val Ser Tyr Ala Phe Ile Leu Ala Ala Ile
 210 215 220

Leu Arg Ile Lys Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr Cys
 225 230 235 240

Gly Ser His Met Met Ala Val Thr Leu Phe Tyr Gly Thr Leu Phe Cys
 245 250 255

Met Tyr Ile Arg Pro Pro Thr Asp Lys Thr Val Glu Glu Ser Lys Ile
 260 265 270

Ile Ala Val Phe Tyr Thr Phe Val Ser Pro Val Leu Asn Pro Leu Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Gln Ala Leu Lys Asn Val Leu
 290 295 300

Arg
 305

<210> 91
 <211> 933
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(930)
 <223>

<220>
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 <222> (378)..(378)
 <223> unknown

<220>
 <221> misc_feature
 <222> (436)..(438)
 <223> unknown

<220>
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 <222> (443)..(444)
 <223> unknown

<400> 91
 atg cct aat ttc acg gat gtg aca gaa ttt act ctc ctg ggg ctg acc

48

Met	Pro	Asn	Phe	Thr	Asp	Val	Thr	Glu	Phe	Thr	Leu	Leu	Gly	Leu	Thr	
1				5					10					15		
tgt	cgt	cag	gag	cta	cag	gtt	ctc	ttt	ttt	gtg	gtg	ttc	cta	gcg	gtt	96
Cys	Arg	Gln	Glu	Leu	Gln	Val	Leu	Phe	Phe	Val	Val	Phe	Leu	Ala	Val	
			20					25					30			
tac	atg	atc	act	ctg	ttg	gga	aat	att	ggg	atg	atc	att	ttg	att	agc	144
Tyr	Met	Ile	Thr	Leu	Leu	Gly	Asn	Ile	Gly	Met	Ile	Ile	Leu	Ile	Ser	
		35					40					45				
atc	agt	cct	cag	ctt	cag	agt	ccc	atg	tac	ttt	ttc	ctg	agt	cat	ctg	192
Ile	Ser	Pro	Gln	Leu	Gln	Ser	Pro	Met	Tyr	Phe	Phe	Leu	Ser	His	Leu	
	50					55					60					
tct	ttt	gcg	gac	gtg	tgc	ttc	tcc	tcc	aac	gtt	acc	ccc	aaa	atg	ctg	240
Ser	Phe	Ala	Asp	Val	Cys	Phe	Ser	Ser	Asn	Val	Thr	Pro	Lys	Met	Leu	
65					70				75					80		
gaa	aac	tta	tta	tca	gag	aca	aaa	acc	att	tcc	tat	gtg	gga	tgc	ttg	288
Glu	Asn	Leu	Leu	Ser	Glu	Thr	Lys	Thr	Ile	Ser	Tyr	Val	Gly	Cys	Leu	
				85					90					95		
gtg	cag	tgc	tac	ttt	ttc	att	gcc	gtt	gtc	cac	gtg	gag	gtc	tat	atc	336
Val	Gln	Cys	Tyr	Phe	Phe	Ile	Ala	Val	Val	His	Val	Glu	Val	Tyr	Ile	
			100					105					110			
ctg	gct	gtg	atg	gcc	ttt	gac	agg	tac	atg	gcc	ggc	tgc	aan	cct	ctg	384
Leu	Ala	Val	Met	Ala	Phe	Asp	Arg	Tyr	Met	Ala	Gly	Cys	Xaa	Pro	Leu	
			115				120					125				
ctt	tat	ggc	agt	aaa	atg	tct	agg	act	gtg	tgt	gtt	cgg	ctc	atc	tct	432
Leu	Tyr	Gly	Ser	Lys	Met	Ser	Arg	Thr	Val	Cys	Val	Arg	Leu	Ile	Ser	
		130				135					140					
gtg	nnn	tat	gnn	tat	gga	ttc	tct	gtc	agc	cta	ata	tgc	aca	cta	tgg	480
Val	Xaa	Tyr	Xaa	Tyr	Gly	Phe	Ser	Val	Ser	Leu	Ile	Cys	Thr	Leu	Trp	
145					150				155					160		
act	tat	ggc	tta	tac	ttc	tgt	gga	aac	ttt	gaa	atc	aat	cac	ttc	tat	528
Thr	Tyr	Gly	Leu	Tyr	Phe	Cys	Gly	Asn	Phe	Glu	Ile	Asn	His	Phe	Tyr	
				165					170					175		
tgt	gca	gat	ccc	cct	ctc	atc	cag	att	gcc	tgt	ggg	aga	gtg	cac	atc	576
Cys	Ala	Asp	Pro	Pro	Leu	Ile	Gln	Ile	Ala	Cys	Gly	Arg	Val	His	Ile	
			180					185					190			
aaa	gaa	atc	aca	atg	att	gtt	att	gct	gga	att	aac	ttc	aca	tat	tcc	624
Lys	Glu	Ile	Thr	Met	Ile	Val	Ile	Ala	Gly	Ile	Asn	Phe	Thr	Tyr	Ser	
			195				200					205				
ctc	tcg	gtg	gtc	ctc	atc	tcc	tac	act	ctc	att	gta	gta	gct	gtg	cta	672
Leu	Ser	Val	Val	Leu	Ile	Ser	Tyr	Thr	Leu	Ile	Val	Val	Ala	Val	Leu	
		210				215					220					
cgc	atg	cgc	tct	gcc	gat	ggc	agg	agg	aag	gcg	ttc	tcc	acc	tgt	ggg	720
Arg	Met	Arg	Ser	Ala	Asp	Gly	Arg	Arg	Lys	Ala	Phe	Ser	Thr	Cys	Gly	
225					230				235					240		
tcc	cac	ttg	acg	gct	gtt	tct	atg	ttt	tat	ggg	acc	ccc	atc	ttc	atg	768
Ser	His	Leu	Thr	Ala	Val	Ser	Met	Phe	Tyr	Gly	Thr	Pro	Ile	Phe	Met	

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	245	250	255	
tat ctc agg aga ccc act gag gaa tcc gta gag cag ggc aaa atg gtg				816
Tyr Leu Arg Arg Pro Thr Glu Glu Ser Val Glu Gln Gly Lys Met Val				
	260	265	270	
gct gtg ttt tac acc aca gta att cct atg ttg aat ccc atg atc tac				864
Ala Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Met Ile Tyr				
	275	280	285	
agt ctg aga aat aag gat gta aaa gaa gca gtc aac aaa gca atc acc				912
Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Val Asn Lys Ala Ile Thr				
	290	295	300	
aag aca tat gtg agg cag taa				933
Lys Thr Tyr Val Arg Gln				
	305	310		

<210> 92
 <211> 310
 <212> PRT
 <213> Homo Sapiens

<220>
 <221> misc_feature
 <222> (126)..(126)
 <223> The 'Xaa' at location 126 stands for Lys, or Asn.

<220>
 <221> misc_feature
 <222> (146)..(146)
 <223> The 'Xaa' at location 146 stands for Lys, Asn, Arg, Ser, Thr, Ile, Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon, Tyr, Trp, Cys, or Phe.

<220>
 <221> misc_feature
 <222> (148)..(148)
 <223> The 'Xaa' at location 148 stands for Glu, Asp, Gly, Ala, or Val.

<220>
 <221> misc_feature
 <222> (378)..(378)
 <223> unknown

<220>
 <221> misc_feature
 <222> (436)..(438)
 <223> unknown

<220>
 <221> misc_feature
 <222> (443)..(444)
 <223> unknown

<400> 92

Met	Pro	Asn	Phe	Thr	Asp	Val	Thr	Glu	Phe	Thr	Leu	Leu	Gly	Leu	Thr
1						5			10					15	

Cys Arg Gln Glu Leu Gln Val Leu Phe Phe Val Val Phe Leu Ala Val
20 25 30

Tyr Met Ile Thr Leu Leu Gly Asn Ile Gly Met Ile Ile Leu Ile Ser
35 40 45

Ile Ser Pro Gln Leu Gln Ser Pro Met Tyr Phe Phe Leu Ser His Leu
50 55 60

Ser Phe Ala Asp Val Cys Phe Ser Ser Asn Val Thr Pro Lys Met Leu
65 70 75 80

Glu Asn Leu Leu Ser Glu Thr Lys Thr Ile Ser Tyr Val Gly Cys Leu
85 90 95

Val Gln Cys Tyr Phe Phe Ile Ala Val Val His Val Glu Val Tyr Ile
100 105 110

Leu Ala Val Met Ala Phe Asp Arg Tyr Met Ala Gly Cys Xaa Pro Leu
115 120 125

Leu Tyr Gly Ser Lys Met Ser Arg Thr Val Cys Val Arg Leu Ile Ser
130 135 140

Val Xaa Tyr Xaa Tyr Gly Phe Ser Val Ser Leu Ile Cys Thr Leu Trp
145 150 155 160

Thr Tyr Gly Leu Tyr Phe Cys Gly Asn Phe Glu Ile Asn His Phe Tyr
165 170 175

Cys Ala Asp Pro Pro Leu Ile Gln Ile Ala Cys Gly Arg Val His Ile
180 185 190

Lys Glu Ile Thr Met Ile Val Ile Ala Gly Ile Asn Phe Thr Tyr Ser
195 200 205

Leu Ser Val Val Leu Ile Ser Tyr Thr Leu Ile Val Val Ala Val Leu
210 215 220

Arg Met Arg Ser Ala Asp Gly Arg Arg Lys Ala Phe Ser Thr Cys Gly
225 230 235 240

Ser His Leu Thr Ala Val Ser Met Phe Tyr Gly Thr Pro Ile Phe Met
245 250 255

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Tyr Leu Arg Arg Pro Thr Glu Glu Ser Val Glu Gln Gly Lys Met Val
 260 265 270

Ala Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Met Ile Tyr
 275 280 285

Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Val Asn Lys Ala Ile Thr
 290 295 300

Lys Thr Tyr Val Arg Gln
 305 310

<210> 93
 <211> 933
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(930)
 <223>

<400> 93 48
 atg gga aga aat aac cta aca aga ccc tct gaa ttc atc ctc ctt gga
 Met Gly Arg Asn Asn Leu Thr Arg Pro Ser Glu Phe Ile Leu Leu Gly
 1 5 10 15
 ctc tcc tct cga cct gag gat cag aag ccg ctc ttt gct gtg ttc ctc 96
 Leu Ser Ser Arg Pro Glu Asp Gln Lys Pro Leu Phe Ala Val Phe Leu
 20 25 30
 ccc atc tac ctt atc aca gtg ata gga aac ctg ctt atc atc ctg gcc 144
 Pro Ile Tyr Leu Ile Thr Val Ile Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45
 atc cgc tca gac act cgt ctc cag acg ccc atg tac ttc ttt cta agc 192
 Ile Arg Ser Asp Thr Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 atc ctg tct ttt gtt gac att tgc tat gtg aca gtc att atc cct aag 240
 Ile Leu Ser Phe Val Asp Ile Cys Tyr Val Thr Val Ile Ile Pro Lys
 65 70 75 80
 atg ctg gtg aac ttc tta tca gag aca aag acc atc tct tac agt gag 288
 Met Leu Val Asn Phe Leu Ser Glu Thr Lys Thr Ile Ser Tyr Ser Glu
 85 90 95
 tgt ctg acc cag atg tac ttt ttc tta gcc ttt gga aac aca gac agt 336
 Cys Leu Thr Gln Met Tyr Phe Phe Leu Ala Phe Gly Asn Thr Asp Ser
 100 105 110
 tac ctg cta gca gcc atg gcc att gac cgc tat gtg gcc ata tgt aat 384
 Tyr Leu Ala Ala Met Ala Ile Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 ccc ttc cac tac atc acc att atg agt cac aga tgc tgt gtc ctg ctt 432

Pro Phe His Tyr Ile Thr Ile Met Ser His Arg Cys Cys Val Leu Leu
 130 135 140

ctg gtt ctc tcc ttc tgc att cca cat ttt cac tcc ctc ctg cac att 480
 Leu Val Leu Ser Phe Cys Ile Pro His Phe His Ser Leu Leu His Ile
 145 150 155 160

ctt ctg act aat cag ctc atc ttc tgt gcc tca aat gtc atc cat cac 528
 Leu Leu Thr Asn Gln Leu Ile Phe Cys Ala Ser Asn Val Ile His His
 165 170 175

ttt ttc tgc gat gat caa cca gtg cta aaa ttg tcc tgt tcc tcc cat 576
 Phe Phe Cys Asp Asp Gln Pro Val Leu Lys Leu Ser Cys Ser Ser His
 180 185 190

ttt gtc aaa gaa atc aca gta atg aca gaa ggc ttg gct gtc ata atg 624
 Phe Val Lys Glu Ile Thr Val Met Thr Glu Gly Leu Ala Val Ile Met
 195 200 205

acc ccg ttt tca tgc atc atc atc tct tat tta aga atc ctc atc act 672
 Thr Pro Phe Ser Cys Ile Ile Ile Ser Tyr Leu Arg Ile Leu Ile Thr
 210 215 220

gtt ctg aag att cct tca gct gct gga aag cgt aaa gca ttt tct acc 720
 Val Leu Lys Ile Pro Ser Ala Ala Gly Lys Arg Lys Ala Phe Ser Thr
 225 230 235 240

tgt ggc tct cat ctc aca gtg gtg acc ctg ttt tat gga agc att agc 768
 Cys Gly Ser His Leu Thr Val Val Thr Leu Phe Tyr Gly Ser Ile Ser
 245 250 255

tat ctc tat ttt cag ccc ctg tcc aac tat act gtc aag gat caa ata 816
 Tyr Leu Tyr Phe Gln Pro Leu Ser Asn Tyr Thr Val Lys Asp Gln Ile
 260 265 270

gca aca att atc tac acc gta ctg act cct atg cta aat cca ttt atc 864
 Ala Thr Ile Ile Tyr Thr Val Leu Thr Pro Met Leu Asn Pro Phe Ile
 275 280 285

tat agt ctg agg aac aaa gac atg aag cag ggt ttg gca aag ttg atg 912
 Tyr Ser Leu Arg Asn Lys Asp Met Lys Gln Gly Leu Ala Lys Leu Met
 290 295 300

cac agg atg aaa tgt cag taa 933
 His Arg Met Lys Cys Gln
 305 310

<210> 94
 <211> 310
 <212> PRT
 <213> Homo Sapiens

<400> 94

Met Gly Arg Asn Asn Leu Thr Arg Pro Ser Glu Phe Ile Leu Leu Gly
 1 5 10 15

Leu Ser Ser Arg Pro Glu Asp Gln Lys Pro Leu Phe Ala Val Phe Leu
 20 25 30

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Pro Ile Tyr Leu Ile Thr Val Ile Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45

Ile Arg Ser Asp Thr Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Ile Leu Ser Phe Val Asp Ile Cys Tyr Val Thr Val Ile Ile Pro Lys
 65 70 75 80

Met Leu Val Asn Phe Leu Ser Glu Thr Lys Thr Ile Ser Tyr Ser Glu
 85 90 95

Cys Leu Thr Gln Met Tyr Phe Phe Leu Ala Phe Gly Asn Thr Asp Ser
 100 105 110

Tyr Leu Leu Ala Ala Met Ala Ile Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Phe His Tyr Ile Thr Ile Met Ser His Arg Cys Cys Val Leu Leu
 130 135 140

Leu Val Leu Ser Phe Cys Ile Pro His Phe His Ser Leu Leu His Ile
 145 150 155 160

Leu Leu Thr Asn Gln Leu Ile Phe Cys Ala Ser Asn Val Ile His His
 165 170 175

Phe Phe Cys Asp Asp Gln Pro Val Leu Lys Leu Ser Cys Ser Ser His
 180 185 190

Phe Val Lys Glu Ile Thr Val Met Thr Glu Gly Leu Ala Val Ile Met
 195 200 205

Thr Pro Phe Ser Cys Ile Ile Ile Ser Tyr Leu Arg Ile Leu Ile Thr
 210 215 220

Val Leu Lys Ile Pro Ser Ala Ala Gly Lys Arg Lys Ala Phe Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Thr Val Val Thr Leu Phe Tyr Gly Ser Ile Ser
 245 250 255

Tyr Leu Tyr Phe Gln Pro Leu Ser Asn Tyr Thr Val Lys Asp Gln Ile
 260 265 270

Ala Thr Ile Ile Tyr Thr Val Leu Thr Pro Met Leu Asn Pro Phe Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Asp Met Lys Gln Gly Leu Ala Lys Leu Met
 290 295 300

His Arg Met Lys Cys Gln
 305 310

<210> 95
 <211> 951
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(948)
 <223>

<400> 95
 atg gga aaa cca ggc aga gtg aac caa acc act gtt tca gac ttc ctc 48
 Met Gly Lys Pro Gly Arg Val Asn Gln Thr Thr Val Ser Asp Phe Leu
 1 5 10 15
 ctt cta gga ctc tct gag tgg cca gag gag cag cct ctt ctg ttt ggc 96
 Leu Leu Gly Leu Ser Glu Trp Pro Glu Glu Gln Pro Leu Leu Phe Gly
 20 25 30
 atc ttc ctt ggc atg tac ctg gtc acc atg gtg ggg aac ctg ctc att 144
 Ile Phe Leu Gly Met Tyr Leu Val Thr Met Val Gly Asn Leu Leu Ile
 35 40 45
 atc ctg gcc atc agc tct gac cca cac ctc cat act ccc atg tac ttc 192
 Ile Leu Ala Ile Ser Ser Asp Pro His Leu His Thr Pro Met Tyr Phe
 50 55 60
 ttt ctg gcc aac ctg tca tta act gat gcc tgt ttc act tct gcc tcc 240
 Phe Leu Ala Asn Leu Ser Leu Thr Asp Ala Cys Phe Thr Ser Ala Ser
 65 70 75 80
 atc ccc aaa atg ctg gcc aac att cat acc cag agt cag atc atc tcg 288
 Ile Pro Lys Met Leu Ala Asn Ile His Thr Gln Ser Gln Ile Ile Ser
 85 90 95
 tat tct ggg tgt ctt gca cag cta tat ttc ctc ctt atg ttt ggt ggc 336
 Tyr Ser Gly Cys Leu Ala Gln Leu Tyr Phe Leu Leu Met Phe Gly Gly
 100 105 110
 ctt gac aac tgc ctg ctg gct gtg atg gca tat gac cgc tat gtg gcc 384
 Leu Asp Asn Cys Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala
 115 120 125
 atc tgc caa cca ctc cat tac agc aca tct atg agt ccc cag ctc tgt 432
 Ile Cys Gln Pro Leu His Tyr Ser Thr Ser Met Ser Pro Gln Leu Cys
 130 135 140

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gca cta atg ctg ggt gtg tgc tgg gtg cta acc aac tgt cct gcc ctg 480
 Ala Leu Met Leu Gly Val Cys Trp Val Leu Thr Asn Cys Pro Ala Leu
 145 150 155 160
 atg cac aca ctg ttg ctg acc cgc gtg gct ttc tgt gcc cag aaa gcc 528
 Met His Thr Leu Leu Thr Arg Val Ala Phe Cys Ala Gln Lys Ala
 165 170 175
 atc cct cat ttc tat tgt gat cct agt gct ctc ctg aag ctt gcc tgc 576
 Ile Pro His Phe Tyr Cys Asp Pro Ser Ala Leu Leu Lys Leu Ala Cys
 180 185 190
 tca gat acc cat gta aac gag ctg atg atc atc acc atg ggc ttg ctg 624
 Ser Asp Thr His Val Asn Glu Leu Met Ile Ile Thr Met Gly Leu Leu
 195 200 205
 ttc ctc act gtt ccc ctc ctg ctg atc gtc ttc tcc tat gtc cgc att 672
 Phe Leu Thr Val Pro Leu Leu Leu Ile Val Phe Ser Tyr Val Arg Ile
 210 215 220
 ttc tgg gct gtg ttt gtc atc tca tct cct gga ggg aga tgg aag gcc 720
 Phe Trp Ala Val Phe Val Ile Ser Ser Pro Gly Gly Arg Trp Lys Ala
 225 230 235 240
 ttc tct acc tgt ggt tct cat ctc acg gtg gtt ctg ctc ttc tat ggg 768
 Phe Ser Thr Cys Gly Ser His Leu Thr Val Val Leu Leu Phe Tyr Gly
 245 250 255
 tct ctt atg ggt gtg tat tta ctt cct cca tca act tac tct aca gag 816
 Ser Leu Met Gly Val Tyr Leu Leu Pro Pro Ser Thr Tyr Ser Thr Glu
 260 265 270
 agg gaa agt agg gct gct gtt ctc tat atg gtg att att ccc acg cta 864
 Arg Glu Ser Arg Ala Ala Val Leu Tyr Met Val Ile Ile Pro Thr Leu
 275 280 285
 aac cca ttc att tat agc ttg agg aac aga gac atg aag gag gct ttg 912
 Asn Pro Phe Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Glu Ala Leu
 290 295 300
 ggt aaa ctt ttt gtc agt gga aaa aca ttc ttt tta tga 951
 Gly Lys Leu Phe Val Ser Gly Lys Thr Phe Phe Leu
 305 310 315

<210> 96
 <211> 316
 <212> PRT
 <213> Homo Sapiens

<400> 96

Met Gly Lys Pro Gly Arg Val Asn Gln Thr Thr Val Ser Asp Phe Leu
 1 5 10 15

Leu Leu Gly Leu Ser Glu Trp Pro Glu Glu Gln Pro Leu Leu Phe Gly
 20 25 30

Ile Phe Leu Gly Met Tyr Leu Val Thr Met Val Gly Asn Leu Leu Ile

35

40

45

Ile Leu Ala Ile Ser Ser Asp Pro His Leu His Thr Pro Met Tyr Phe
 50 55 60

Phe Leu Ala Asn Leu Ser Leu Thr Asp Ala Cys Phe Thr Ser Ala Ser
 65 70 75 80

Ile Pro Lys Met Leu Ala Asn Ile His Thr Gln Ser Gln Ile Ile Ser
 85 90 95

Tyr Ser Gly Cys Leu Ala Gln Leu Tyr Phe Leu Leu Met Phe Gly Gly
 100 105 110

Leu Asp Asn Cys Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala
 115 120 125

Ile Cys Gln Pro Leu His Tyr Ser Thr Ser Met Ser Pro Gln Leu Cys
 130 135 140

Ala Leu Met Leu Gly Val Cys Trp Val Leu Thr Asn Cys Pro Ala Leu
 145 150 155 160

Met His Thr Leu Leu Leu Thr Arg Val Ala Phe Cys Ala Gln Lys Ala
 165 170 175

Ile Pro His Phe Tyr Cys Asp Pro Ser Ala Leu Leu Lys Leu Ala Cys
 180 185 190

Ser Asp Thr His Val Asn Glu Leu Met Ile Ile Thr Met Gly Leu Leu
 195 200 205

Phe Leu Thr Val Pro Leu Leu Leu Ile Val Phe Ser Tyr Val Arg Ile
 210 215 220

Phe Trp Ala Val Phe Val Ile Ser Ser Pro Gly Gly Arg Trp Lys Ala
 225 230 235 240

Phe Ser Thr Cys Gly Ser His Leu Thr Val Val Leu Leu Phe Tyr Gly
 245 250 255

Ser Leu Met Gly Val Tyr Leu Leu Pro Pro Ser Thr Tyr Ser Thr Glu
 260 265 270

Arg Glu Ser Arg Ala Ala Val Leu Tyr Met Val Ile Ile Pro Thr Leu
 275 280 285

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Asn Pro Phe Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Glu Ala Leu
 290 295 300

Gly Lys Leu Phe Val Ser Gly Lys Thr Phe Phe Leu
 305 310 315

<210> 97
 <211> 975
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(972)
 <223>

<400> 97 48
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 Met Gly Met Ser Asn Leu Thr Arg Leu Ser Glu Phe Ile Leu Leu Gly
 1 5 10 15
 ctc tcc tct cgg tct gaa gac cag agg cca ctc ttt gcc ctc ttt ctt 96
 Leu Ser Ser Arg Ser Glu Asp Gln Arg Pro Leu Phe Ala Leu Phe Leu
 20 25 30
 atc ata tac ctg gtc act ttg atg gga aat ctg ctc atc atc ttg gct 144
 Ile Ile Tyr Leu Val Thr Leu Met Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45
 atc cac tct gat cct cga ctt caa aac cct atg tat ttt ttc cta agc 192
 Ile His Ser Asp Pro Arg Leu Gln Asn Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 atc ttg tcc ttt gct gat att tgc tac aca aca gtc ata gtc cca aag 240
 Ile Leu Ser Phe Ala Asp Ile Cys Tyr Thr Thr Val Ile Val Pro Lys
 65 70 75 80
 atg ctc gtg aac ttc tta tca gag aaa aag acc att tcc tat gct gaa 288
 Met Leu Val Asn Phe Leu Ser Glu Lys Lys Thr Ile Ser Tyr Ala Glu
 85 90 95
 tgt ctg gca cag atg tat ttc ttc ctg gtt ttt gga aac ata gat agt 336
 Cys Leu Ala Gln Met Tyr Phe Phe Leu Val Phe Gly Asn Ile Asp Ser
 100 105 110
 tat ctc ctg gcg gct atg gcc atc aac cgc tgt gta gcc att tgt aac 384
 Tyr Leu Leu Ala Ala Met Ala Ile Asn Arg Cys Val Ala Ile Cys Asn
 115 120 125
 cca ttc cat tat gtc act gtt atg aac cgc aga tgc tgt gtg ttg cta 432
 Pro Phe His Tyr Val Thr Val Met Asn Arg Arg Cys Cys Val Leu Leu
 130 135 140
 cta gca ttc ccc atc act ttc tcc tat ttc cac tct ctc cta cat gtc 480
 Leu Ala Phe Pro Ile Thr Phe Ser Tyr Phe His Ser Leu Leu His Val
 145 150 155 160

ctc ctg gtg aat cgg ctc acc ttt tgt aca tca aat gtt atc cat cat 528
 Leu Leu Val Asn Arg Leu Thr Phe Cys Thr Ser Asn Val Ile His His
 165 170 175

ttt ttt tgt gat gtc aac cct gtg ctg aaa ctg tcc tgc tcc tcc acc 576
 Phe Phe Cys Asp Val Asn Pro Val Leu Lys Leu Ser Cys Ser Ser Thr
 180 185 190

ttt gtc aat gaa att gtg gcc atg aca gaa ggg ctg gcc tct gtg atg 624
 Phe Val Asn Glu Ile Val Ala Met Thr Glu Gly Leu Ala Ser Val Met
 195 200 205

gct cca ttt gtc tgt atc atc atc tct tat cta aga att ctc atc gct 672
 Ala Pro Phe Val Cys Ile Ile Ile Ser Tyr Leu Arg Ile Leu Ile Ala
 210 215 220

gtt ctc aag att ccc tca gca gct gga aaa cac aaa gcc ttc tcc acc 720
 Val Leu Lys Ile Pro Ser Ala Ala Gly Lys His Lys Ala Phe Ser Thr
 225 230 235 240

tgc agc tcc cat ctc act gtg gtg att ctg ttt tat ggg agt att agc 768
 Cys Ser Ser His Leu Thr Val Val Ile Leu Phe Tyr Gly Ser Ile Ser
 245 250 255

tat gtc tat ttg cag cct ttg tcc agc tat act gtc aag gac cga ata 816
 Tyr Val Tyr Leu Gln Pro Leu Ser Ser Tyr Thr Val Lys Asp Arg Ile
 260 265 270

gca aca atc aac tac act gtg ttg aca tca gtg ttg aac cca ttt atc 864
 Ala Thr Ile Asn Tyr Thr Val Leu Thr Ser Val Leu Asn Pro Phe Ile
 275 280 285

tac agt tta aga aac aaa gac atg aaa cgg ggc tta cag aaa ttg ata 912
 Tyr Ser Leu Arg Asn Lys Asp Met Lys Arg Gly Leu Gln Lys Leu Ile
 290 295 300

aac aag att aag tct caa atg agt agg ttc tct aca aag acc aat aaa 960
 Asn Lys Ile Lys Ser Gln Met Ser Arg Phe Ser Thr Lys Thr Asn Lys
 305 310 315 320

atc tgt gga ccc tga 975
 Ile Cys Gly Pro

<210> 98
 <211> 324
 <212> PRT
 <213> Homo Sapiens

<400> 98

Met Gly Met Ser Asn Leu Thr Arg Leu Ser Glu Phe Ile Leu Leu Gly
1 5 10 15

Leu Ser Ser Arg Ser Glu Asp Gln Arg Pro Leu Phe Ala Leu Phe Leu
20 25 30

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Ile Ile Tyr Leu Val Thr Leu Met Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45

Ile His Ser Asp Pro Arg Leu Gln Asn Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Ile Leu Ser Phe Ala Asp Ile Cys Tyr Thr Thr Val Ile Val Pro Lys
 65 70 75 80

Met Leu Val Asn Phe Leu Ser Glu Lys Lys Thr Ile Ser Tyr Ala Glu
 85 90 95

Cys Leu Ala Gln Met Tyr Phe Phe Leu Val Phe Gly Asn Ile Asp Ser
 100 105 110

Tyr Leu Leu Ala Ala Met Ala Ile Asn Arg Cys Val Ala Ile Cys Asn
 115 120 125

Pro Phe His Tyr Val Thr Val Met Asn Arg Arg Cys Cys Val Leu Leu
 130 135 140

Leu Ala Phe Pro Ile Thr Phe Ser Tyr Phe His Ser Leu Leu His Val
 145 150 155 160

Leu Leu Val Asn Arg Leu Thr Phe Cys Thr Ser Asn Val Ile His His
 165 170 175

Phe Phe Cys Asp Val Asn Pro Val Leu Lys Leu Ser Cys Ser Ser Thr
 180 185 190

Phe Val Asn Glu Ile Val Ala Met Thr Glu Gly Leu Ala Ser Val Met
 195 200 205

Ala Pro Phe Val Cys Ile Ile Ile Ser Tyr Leu Arg Ile Leu Ile Ala
 210 215 220

Val Leu Lys Ile Pro Ser Ala Ala Gly Lys His Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ser Ser His Leu Thr Val Val Ile Leu Phe Tyr Gly Ser Ile Ser
 245 250 255

Tyr Val Tyr Leu Gln Pro Leu Ser Ser Tyr Thr Val Lys Asp Arg Ile
 260 265 270

Ala Thr Ile Asn Tyr Thr Val Leu Thr Ser Val Leu Asn Pro Phe Ile

275

280

285

Tyr Ser Leu Arg Asn Lys Asp Met Lys Arg Gly Leu Gln Lys Leu Ile
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Asn Lys Ile Lys Ser Gln Met Ser Arg Phe Ser Thr Lys Thr Asn Lys
 305 310 315 320

Ile Cys Gly Pro

<210> 99
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

<400> 99
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 Met Glu Asn Gln Ser Ser Ile Ser Glu Phe Phe Leu Arg Gly Ile Ser
 1 5 10 15
 gcg cct cca gag caa cag cag tcc ctc ttc gga att ttc ctg tgt atg 96
 Ala Pro Pro Glu Gln Gln Gln Ser Leu Phe Gly Ile Phe Leu Cys Met
 20 25 30
 tat ctt gtc acc ttg act ggg aac ctg ctc atc atc ctg gcc att ggc 144
 Tyr Leu Val Thr Leu Thr Gly Asn Leu Leu Ile Ile Leu Ala Ile Gly
 35 40 45
 tct gac ctg cac ctc cac acc ccc atg tac ttt ttc ttg gcc aac ctg 192
 Ser Asp Leu His Leu His Thr Pro Met Tyr Phe Phe Leu Ala Asn Leu
 50 55 60
 tct ttt gtt gac atg ggt tta acg tcc tcc aca gtt acc aag atg ctg 240
 Ser Phe Val Asp Met Gly Leu Thr Ser Ser Thr Val Thr Lys Met Leu
 65 70 75 80
 gtg aat ata cag act cgg cat cac acc atc tcc tat acg ggt tgc ctc 288
 Val Asn Ile Gln Thr Arg His His Thr Ile Ser Tyr Thr Gly Cys Leu
 85 90 95
 acg caa atg tat ttc ttt ctg atg ttt ggt gat cta gac agc ttc ttc 336
 Thr Gln Met Tyr Phe Phe Leu Met Phe Gly Asp Leu Asp Ser Phe Phe
 100 105 110
 ctg gct gcc atg gcg tat gac cgc tat gtg gcc att tgc cac ccc ctc 384
 Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His Pro Leu
 115 120 125
 tgc tac tcc aca gtc atg agg ccc caa gtc tgt gcc cta atg ctt gca 432
 Cys Tyr Ser Thr Val Met Arg Pro Gln Val Cys Ala Leu Met Leu Ala

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<210> 100
<211> 311
<212> PRT
<213> Homo Sapiens
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$\langle 400 \rangle$ 100

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<400> 100
Met Glu Asn Gln Ser Ser Ile Ser Glu Phe Phe Leu Arg Gly Ile Ser
1          5          10          15

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Ala Pro Pro Glu Gln Gln Gln Ser Leu Phe Gly Ile Phe Leu Cys Met
20 25 30

Tyr Leu Val Thr Leu Thr Gly Asn Leu Leu Ile Ile Leu Ala Ile Gly
35 40 45

Ser Asp Leu His Leu His Thr Pro Met Tyr Phe Phe Leu Ala Asn Leu
50 55 60

Ser Phe Val Asp Met Gly Leu Thr Ser Ser Thr Val Thr Lys Met Leu
65 70 75 80

Val Asn Ile Gln Thr Arg His His Thr Ile Ser Tyr Thr Gly Cys Leu
85 90 95

Thr Gln Met Tyr Phe Phe Leu Met Phe Gly Asp Leu Asp Ser Phe Phe
100 105 110

Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His Pro Leu
115 120 125

Cys Tyr Ser Thr Val Met Arg Pro Gln Val Cys Ala Leu Met Leu Ala
130 135 140

Leu Cys Trp Val Leu Thr Asn Ile Val Ala Leu Thr His Thr Phe Leu
145 150 155 160

Met Ala Arg Leu Ser Phe Cys Val Thr Gly Glu Ile Ala His Phe Phe
165 170 175

Cys Asp Ile Thr Pro Val Leu Lys Leu Ser Cys Ser Asp Thr His Ile
180 185 190

Asn Glu Met Met Val Phe Val Leu Gly Gly Thr Val Leu Ile Val Pro
195 200 205

Phe Leu Cys Ile Val Thr Ser Tyr Ile His Ile Val Pro Ala Ile Leu
210 215 220

Arg Val Arg Thr Arg Gly Gly Val Gly Lys Ala Phe Ser Thr Cys Ser
225 230 235 240

Ser His Leu Cys Val Val Cys Val Phe Tyr Gly Thr Leu Phe Ser Ala
245 250 255

Tyr Leu Cys Pro Pro Ser Ile Ala Ser Glu Glu Lys Asp Ile Ala Ala
260 265 270

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Ala Ala Met Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Phe Ile Tyr
 275 280 285

Ser Leu Arg Asn Lys Asp Met Lys Gly Ala Leu Lys Arg Leu Phe Ser
 290 295 300

His Arg Ser Ile Val Ser Ser
 305 310

<210> 101
 <211> 942
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(939)
 <223>

<400> 101
 atg aag agg gag aat cag agc agt gtg tct gag ttc ctc ctc ctg gac 48
 Met Lys Arg Glu Asn Gln Ser Ser Val Ser Glu Phe Leu Leu Leu Asp
 1 5 10 15
 ctc ccc atc tgg cca gag cag cag gct gtg ttc ttc acc ctg ttc ttg 96
 Leu Pro Ile Trp Pro Glu Gln Gln Ala Val Phe Phe Thr Leu Phe Leu
 20 25 30
 ggc atg tac ctg atc acg gtg ctg ggg aac ctg ctc atc atc ctg ctc 144
 Gly Met Tyr Leu Ile Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Leu
 35 40 45
 atc cgg ctg gac tct cac ctt cac acc ccc atg ttc ttc ttc ctc agc 192
 Ile Arg Leu Asp Ser His Leu His Thr Pro Met Phe Phe Phe Leu Ser
 50 55 60
 cac ttg gct ctc act gac atc tcc ctt tca tct gtc act gtc cca aag 240
 His Leu Ala Leu Thr Asp Ile Ser Leu Ser Ser Val Thr Val Pro Lys
 65 70 75 80
 atg tta tta agc atg caa act cag gat caa tcc att ctt tat gca ggg 288
 Met Leu Leu Ser Met Gln Thr Gln Asp Gln Ser Ile Leu Tyr Ala Gly
 85 90 95
 tgt gta act cag atg tat ttt ttc ata ttt ttc act gat cta gac aat 336
 Cys Val Thr Gln Met Tyr Phe Phe Ile Phe Phe Thr Asp Leu Asp Asn
 100 105 110
 ttc ctt ctc act tca atg gca tac gat cgg tat gtg gcc atc tgt cac 384
 Phe Leu Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 ccc ctc cgc tac acc act atc atg aaa gag gga ctg tgt aac tta cta 432
 Pro Leu Arg Tyr Thr Thr Ile Met Lys Glu Gly Leu Cys Asn Leu Leu
 130 135 140
 gtc act gtg tcc tgg atc ctc tcc tgt acc aat gcc ctg tct cac act 480

Val Thr Val Ser Trp Ile Leu Ser Cys Thr Asn Ala Leu Ser His Thr
 145 150 155 160

ctc ctc ctg gcc cag ctg tcc ttt tgt gct gac aac acc atc ccc cat 528
 Leu Leu Leu Ala Gln Leu Ser Phe Cys Ala Asp Asn Thr Ile Pro His
 165 170 175

ttc ttc tgt gat ctt gtt gcc cta ctc aag ctc tca tgc tca gac atc 576
 Phe Phe Cys Asp Leu Val Ala Leu Leu Lys Leu Ser Cys Ser Asp Ile
 180 185 190

tcc ctc aat gag ctg gtc att ttc aca gtg gga cag gca gtc att act 624
 Ser Leu Asn Glu Leu Val Ile Phe Thr Val Gly Gln Ala Val Ile Thr
 195 200 205

cta cca cta ata tgc atc ttg atc tct tat ggc cac att ggg gtc acc 672
 Leu Pro Leu Ile Cys Ile Leu Ile Ser Tyr Gly His Ile Gly Val Thr
 210 215 220

atc ctc aag gct cca tct act aag ggc atc ttc aaa gct ttg tcc acc 720
 Ile Leu Lys Ala Pro Ser Thr Lys Gly Ile Phe Lys Ala Leu Ser Thr
 225 230 235 240

tgt ggc tct cac ctc tct gtg gtg tct ctg tat tat ggc aca att att 768
 Cys Gly Ser His Leu Ser Val Val Ser Leu Tyr Tyr Gly Thr Ile Ile
 245 250 255

gga ctg tat ttt ctc ccc tca tcc agt gcc tcc agt gac aag gac gta 816
 Gly Leu Tyr Phe Leu Pro Ser Ser Ser Ala Ser Ser Asp Lys Asp Val
 260 265 270

att gcc tct gtg atg tac acg gtg atc acc cca ttg ctg aat ccc ttc 864
 Ile Ala Ser Val Met Tyr Thr Val Ile Thr Pro Leu Leu Asn Pro Phe
 275 280 285

att tat agc cta agg aac agg gac ata aag gga gcc ctg gag aga ctc 912
 Ile Tyr Ser Leu Arg Asn Arg Asp Ile Lys Gly Ala Leu Glu Arg Leu
 290 295 300

ttc aac agg gca aca gtc tta tct caa tga 942
 Phe Asn Arg Ala Thr Val Leu Ser Gln
 305 310

<210> 102

<211> 313

<212> PRT

<213> Homo Sapiens

<400> 102

Met Lys Arg Glu Asn Gln Ser Ser Val Ser Glu Phe Leu Leu Leu Asp
 1 5 10 15

Leu Pro Ile Trp Pro Glu Gln Gln Ala Val Phe Phe Thr Leu Phe Leu
 20 25 30

Gly Met Tyr Leu Ile Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Leu
 35 40 45

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Ile Arg Leu Asp Ser His Leu His Thr Pro Met Phe Phe Phe Leu Ser
50 55 60

His Leu Ala Leu Thr Asp Ile Ser Leu Ser Ser Val Thr Val Pro Lys
65 70 75 80

Met Leu Leu Ser Met Gln Thr Gln Asp Gln Ser Ile Leu Tyr Ala Gly
85 90 95

Cys Val Thr Gln Met Tyr Phe Phe Ile Phe Phe Thr Asp Leu Asp Asn
100 105 110

Phe Leu Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu Arg Tyr Thr Thr Ile Met Lys Glu Gly Leu Cys Asn Leu Leu
130 135 140

Val Thr Val Ser Trp Ile Leu Ser Cys Thr Asn Ala Leu Ser His Thr
145 150 155 160

Leu Leu Leu Ala Gln Leu Ser Phe Cys Ala Asp Asn Thr Ile Pro His
165 170 175

Phe Phe Cys Asp Leu Val Ala Leu Leu Lys Leu Ser Cys Ser Asp Ile
180 185 190

Ser Leu Asn Glu Leu Val Ile Phe Thr Val Gly Gln Ala Val Ile Thr
195 200 205

Leu Pro Leu Ile Cys Ile Leu Ile Ser Tyr Gly His Ile Gly Val Thr
210 215 220

Ile Leu Lys Ala Pro Ser Thr Lys Gly Ile Phe Lys Ala Leu Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ser Val Val Ser Leu Tyr Tyr Gly Thr Ile Ile
245 250 255

Gly Leu Tyr Phe Leu Pro Ser Ser Ser Ala Ser Ser Asp Lys Asp Val
260 265 270

Ile Ala Ser Val Met Tyr Thr Val Ile Thr Pro Leu Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Ile Lys Gly Ala Leu Glu Arg Leu
 290 295 300

Phe Asn Arg Ala Thr Val Leu Ser Gln
 305 310

<210> 103
 <211> 930
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(927)
 <223>

<400> 103
 atg gaa aga atc aac cac acc agc agt gtc tcc gag ttt atc ctc ctg 48
 Met Glu Arg Ile Asn His Thr Ser Ser Val Ser Glu Phe Ile Leu Leu
 1 5 10 15
 gga ctc tcc tcc cgg cct gag gac caa aag aca ctc ttt gtt ctc ttc 96
 Gly Leu Ser Ser Arg Pro Glu Asp Gln Lys Thr Leu Phe Val Leu Phe
 20 25 30
 ctc atc gtg tac ctg gtc acc ata aca ggg aac ctg ctc atc atc ctg 144
 Leu Ile Val Tyr Leu Val Thr Ile Thr Gly Asn Leu Leu Ile Ile Leu
 35 40 45
 gcc att cgc ttc aac ccc cat ctt cag acc cct atg tat ttc ttc ttg 192
 Ala Ile Arg Phe Asn Pro His Leu Gln Thr Pro Met Tyr Phe Phe Leu
 50 55 60
 agt ttt ctg tct ctc act gat att tgc ttt aca aca agc gtt gtc ccc 240
 Ser Phe Leu Ser Leu Thr Asp Ile Cys Phe Thr Thr Ser Val Val Pro
 65 70 75 80
 aag atg ctg atg aac ttc ctg tca gaa aag aag acc atc tcc tat gct 288
 Lys Met Leu Met Asn Phe Leu Ser Glu Lys Lys Thr Ile Ser Tyr Ala
 85 90 95
 ggg tgt ctg aca cag atg tat ttt ctc tat gcc ttg ggc aac agt gac 336
 Gly Cys Leu Thr Gln Met Tyr Phe Leu Tyr Ala Leu Gly Asn Ser Asp
 100 105 110
 agc tgc ctt ctg gca gtc atg gcc ttt gac cgc tat gtg gcc gtc tgt 384
 Ser Cys Leu Leu Ala Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys
 115 120 125
 gac cct ttc cac tat gtc acc acc atg agc cac cac cac tgt gtc ctg 432
 Asp Pro Phe His Tyr Val Thr Thr Met Ser His His His Cys Val Leu
 130 135 140
 ctg gtg gcc ttc tcc tgc tca ttt cct cac ctc cac tca ctc ctg cac 480
 Leu Val Ala Phe Ser Cys Ser Phe Pro His Leu His Ser Leu Leu His
 145 150 155 160

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aca ctt ctg ctg aat cgt ctc acc ttc tgt gac tcc aat gtt atc cac 528
 Thr Leu Leu Leu Asn Arg Leu Thr Phe Cys Asp Ser Asn Val Ile His
 165 170 175
 cac ttt ctc tgt gac ctc agc cct gtg ctg aaa ttg tcc tgc tct tcc 576
 His Phe Leu Cys Asp Leu Ser Pro Val Leu Lys Leu Ser Cys Ser Ser
 180 185 190
 ata ttt gtc aat gaa att gtg cag atg aca gaa gca cct att gtt ttg 624
 Ile Phe Val Asn Glu Ile Val Gln Met Thr Glu Ala Pro Ile Val Leu
 195 200 205
 gtg act cgt ttt ctc tgc att gct ttc tct tat ata cga atc ctc act 672
 Val Thr Arg Phe Leu Cys Ile Ala Phe Ser Tyr Ile Arg Ile Leu Thr
 210 215 220
 aca gtt ctc aag att ccc tct act tct ggg aaa cgc aaa gcc ttc tcc 720
 Thr Val Leu Lys Ile Pro Ser Thr Ser Gly Lys Arg Lys Ala Phe Ser
 225 230 235 240
 acc tgt ggt ttt tac ctc acc gtg gtg acg ctc ttt tat gga agc atc 768
 Thr Cys Gly Phe Tyr Leu Thr Val Val Thr Leu Phe Tyr Gly Ser Ile
 245 250 255
 ttc tgt gtc tat tta cag ccc cca tcc acc tac gct gtc aag gac cac 816
 Phe Cys Val Tyr Leu Gln Pro Pro Ser Thr Tyr Ala Val Lys Asp His
 260 265 270
 gtg gca aca att gtt tac aca gtt ttg tca tcc atg ctc aat cct ttt 864
 Val Ala Thr Ile Val Tyr Thr Val Leu Ser Ser Met Leu Asn Pro Phe
 275 280 285
 atc tac agc ctg aga aac aaa gac ctg aaa cag ggc ctg agg aag ctt 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Leu Lys Gln Gly Leu Arg Lys Leu
 290 295 300
 atg agc aag aga tcc tag 930
 Met Ser Lys Arg Ser
 305

<210> 104
 <211> 309
 <212> PRT
 <213> Homo Sapiens

<400> 104

Met Glu Arg Ile Asn His Thr Ser Ser Val Ser Glu Phe Ile Leu Leu
 1 5 10 15

Gly Leu Ser Ser Arg Pro Glu Asp Gln Lys Thr Leu Phe Val Leu Phe
 20 25 30

Leu Ile Val Tyr Leu Val Thr Ile Thr Gly Asn Leu Leu Ile Ile Leu
 35 40 45

Ala Ile Arg Phe Asn Pro His Leu Gln Thr Pro Met Tyr Phe Phe Leu

50	55	60
Ser Phe Leu Ser Leu Thr Asp Ile Cys Phe Thr Thr Ser Val Val Pro		
65	70	75 80
Lys Met Leu Met Asn Phe Leu Ser Glu Lys Lys Thr Ile Ser Tyr Ala		
	85	90 95
Gly Cys Leu Thr Gln Met Tyr Phe Leu Tyr Ala Leu Gly Asn Ser Asp		
	100	105 110
Ser Cys Leu Leu Ala Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys		
	115	120 125
Asp Pro Phe His Tyr Val Thr Thr Met Ser His His His Cys Val Leu		
	130	135 140
Leu Val Ala Phe Ser Cys Ser Phe Pro His Leu His Ser Leu Leu His		
	145	150 155 160
Thr Leu Leu Leu Asn Arg Leu Thr Phe Cys Asp Ser Asn Val Ile His		
	165	170 175
His Phe Leu Cys Asp Leu Ser Pro Val Leu Lys Leu Ser Cys Ser Ser		
	180	185 190
Ile Phe Val Asn Glu Ile Val Gln Met Thr Glu Ala Pro Ile Val Leu		
	195	200 205
Val Thr Arg Phe Leu Cys Ile Ala Phe Ser Tyr Ile Arg Ile Leu Thr		
	210	215 220
Thr Val Leu Lys Ile Pro Ser Thr Ser Gly Lys Arg Lys Ala Phe Ser		
	225	230 235 240
Thr Cys Gly Phe Tyr Leu Thr Val Val Thr Leu Phe Tyr Gly Ser Ile		
	245	250 255
Phe Cys Val Tyr Leu Gln Pro Pro Ser Thr Tyr Ala Val Lys Asp His		
	260	265 270
Val Ala Thr Ile Val Tyr Thr Val Leu Ser Ser Met Leu Asn Pro Phe		
	275	280 285
Ile Tyr Ser Leu Arg Asn Lys Asp Leu Lys Gln Gly Leu Arg Lys Leu		
	290	295 300

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Met Ser Lys Arg Ser
305

<210> 105
<211> 930
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1) .. (927)
<223>

<400> 105
atg gct gca gga aat cac tct aca gtg aca gag ttc att ctc aag ggt 48
Met Ala Ala Gly Asn His Ser Thr Val Thr Glu Phe Ile Leu Lys Gly 15
1 5 10 15
tta acg aag aga gca gac ctc cag ctc ccc ctc ttt ctc ctc ttc ctc 96
Leu Thr Lys Arg Ala Asp Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu 30
20 25 30
ggg atc tac ttg gtc acc atc gtg ggg aac ctg ggc atg atc act cta 144
Gly Ile Tyr Leu Val Thr Ile Val Gly Asn Leu Gly Met Ile Thr Leu 45
35 40 45
att tgt ctg aac tct cag ctg cac acc ccc atg tac tac ttt ctc agc 192
Ile Cys Leu Asn Ser Gln Leu His Thr Pro Met Tyr Tyr Phe Leu Ser 60
50 55 60
aat ctg tca ctc atg gat ctc tgc tac tcc tcc gtc att acc cct aag 240
Asn Leu Ser Leu Met Asp Leu Cys Tyr Ser Ser Val Ile Thr Pro Lys 80
65 70 75 80
atg ctg gtg aac ttt gtg tca gag aaa aac atc atc tcc tac gca ggg 288
Met Leu Val Asn Phe Val Ser Glu Lys Asn Ile Ile Ser Tyr Ala Gly 95
85 90 95
tgc atg tca cag ctc tac ttc ttc ctt gtt ttt gtc att gct gag tgt 336
Cys Met Ser Gln Leu Tyr Phe Phe Leu Val Phe Val Ile Ala Glu Cys 110
100 105 110
tac atg ctg aca gtg atg gcc tac gac cgc tat gtt gcc atc tgc cac 384
Tyr Met Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His 125
115 120 125
cct ttg ctt tac aac atc att atg tct cat cac acc tgc ctg ctg ctg 432
Pro Leu Leu Tyr Asn Ile Ile Met Ser His His Thr Cys Leu Leu Leu 140
130 135 140
gtg gct gtg gtc tac gcc atc gga ctc att ggc tcc aca ata gaa act 480
Val Ala Val Val Tyr Ala Ile Gly Leu Ile Gly Ser Thr Ile Glu Thr 160
145 150 155 160
ggc ctc atg tta aaa ctg ccc tat tgt gag cac ctc atc agt cac tac 528
Gly Leu Met Leu Lys Leu Pro Tyr Cys Glu His Leu Ile Ser His Tyr 175
165 170 175

ttc tgt gac atc ctc cct ctc atg aag ctg tcc tgc tct agc acc tat 576
 Phe Cys Asp Ile Leu Pro Leu Met Lys Leu Ser Cys Ser Ser Thr Tyr
 180 185 190

 gat gtt gag atg aca gtc ttc ttt tgc gct gga ttc aac atc ata gtc 624
 Asp Val Glu Met Thr Val Phe Phe Ser Ala Gly Phe Asn Ile Ile Val
 195 200 205

 acg agc tta aca gtt ctt gtt tct tac acc ttc att ctc tcc agc atc 672
 Thr Ser Leu Thr Val Leu Val Ser Tyr Thr Phe Ile Leu Ser Ser Ile
 210 215 220

 ctc ggc atc agc acc aca gag ggg aga tcc aaa gcc ttc agc acc tgc 720
 Leu Gly Ile Ser Thr Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
 225 230 235 240

 agc tcc cac ctt gca gcc gtg gga atg ttc tat gga tca act gca ttc 768
 Ser Ser His Leu Ala Ala Val Gly Met Phe Tyr Gly Ser Thr Ala Phe
 245 250 255

 atg tac tta aaa ccc tcc aca atc agt tcc ttg acc cag gag aat gtg 816
 Met Tyr Leu Lys Pro Ser Thr Ile Ser Ser Leu Thr Gln Glu Asn Val
 260 265 270

 gcc tct gtg ttc tac acc acg gta atc ccc atg ttg aat ccc cta atc 864
 Ala Ser Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285

 tac agc ctg agg aac aag gaa gta aag gct gcc gtg cag aaa acg ctg 912
 Tyr Ser Leu Arg Asn Lys Glu Val Lys Ala Ala Val Gln Lys Thr Leu
 290 295 300

 agg ggt aaa ctg ttt tga 930
 Arg Gly Lys Leu Phe
 305

<210> 106
 <211> 309
 <212> PRT
 <213> Homo Sapiens

<400> 106

Met Ala Ala Gly Asn His Ser Thr Val Thr Glu Phe Ile Leu Lys Gly
1 5 10 15

Leu Thr Lys Arg Ala Asp Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
20 25 30

Gly Ile Tyr Leu Val Thr Ile Val Gly Asn Leu Gly Met Ile Thr Leu
35 40 45

Ile Cys Leu Asn Ser Gln Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
50 55 60

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Asn Leu Ser Leu Met Asp Leu Cys Tyr Ser Ser Val Ile Thr Pro Lys
 65 70 75 80

Met Leu Val Asn Phe Val Ser Glu Lys Asn Ile Ile Ser Tyr Ala Gly
 85 90 95

Cys Met Ser Gln Leu Tyr Phe Phe Leu Val Phe Val Ile Ala Glu Cys
 100 105 110

Tyr Met Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu Leu Tyr Asn Ile Ile Met Ser His His Thr Cys Leu Leu Leu
 130 135 140

Val Ala Val Val Tyr Ala Ile Gly Leu Ile Gly Ser Thr Ile Glu Thr
 145 150 155 160

Gly Leu Met Leu Lys Leu Pro Tyr Cys Glu His Leu Ile Ser His Tyr
 165 170 175

Phe Cys Asp Ile Leu Pro Leu Met Lys Leu Ser Cys Ser Ser Thr Tyr
 180 185 190

Asp Val Glu Met Thr Val Phe Phe Ser Ala Gly Phe Asn Ile Ile Val
 195 200 205

Thr Ser Leu Thr Val Leu Val Ser Tyr Thr Phe Ile Leu Ser Ser Ile
 210 215 220

Leu Gly Ile Ser Thr Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
 225 230 235 240

Ser Ser His Leu Ala Ala Val Gly Met Phe Tyr Gly Ser Thr Ala Phe
 245 250 255

Met Tyr Leu Lys Pro Ser Thr Ile Ser Ser Leu Thr Gln Glu Asn Val
 260 265 270

Ala Ser Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Glu Val Lys Ala Ala Val Gln Lys Thr Leu
 290 295 300

Arg Gly Lys Leu Phe

305

<210> 107
 <211> 963
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (960)
 <223>

<400> 107
 atg agt tcc tgc aac ttc aca cat gcc acc tgt gtg ctt att ggt atc 48
 Met Ser Ser Cys Asn Phe Thr His Ala Thr Cys Val Leu Ile Gly Ile
 1 5 10 15

cca gga tta gag aaa gcc cat ttc tgg gtt ggc ttc ccc ctc ctt tcc 96
 Pro Gly Leu Glu Lys Ala His Phe Trp Val Gly Phe Pro Leu Leu Ser
 20 25 30

atg tat gta gtg gca atg tgt gga aac tgc atc gtg gtc ttc atc gta 144
 Met Tyr Val Val Ala Met Cys Gly Asn Cys Ile Val Val Phe Ile Val
 35 40 45

agg acg gaa cgc agc ctg cac gct ccg atg tac ctc ttt ctc tgc atg 192
 Arg Thr Glu Arg Ser Leu His Ala Pro Met Tyr Leu Phe Leu Cys Met
 50 55 60

ctt gca gcc att gac ctg gcc tta tcc aca tcc acc atg cct aag atc 240
 Leu Ala Ala Ile Asp Leu Ala Leu Ser Thr Ser Thr Met Pro Lys Ile
 65 70 75 80

ctt gcc ctt ttc tgg ttt gat tcc cga gag att agc att gag gcc tgt 288
 Leu Ala Leu Phe Trp Phe Asp Ser Arg Glu Ile Ser Ile Glu Ala Cys
 85 90 95

ctt acc cag atg ttc ttt att cat gcc ctc tca gcc att gaa tcc acc 336
 Leu Thr Gln Met Phe Phe Ile His Ala Leu Ser Ala Ile Glu Ser Thr
 100 105 110

atc ctg ctg gcc atg gcc ttt gac cgt tat gtg gcc atc tgc cac cca 384
 Ile Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro
 115 120 125

ctg cgc cat gct gca gtg ctc aac aat aca gta aca gcc cag att ggc 432
 Leu Arg His Ala Ala Val Leu Asn Asn Thr Val Thr Ala Gln Ile Gly
 130 135 140

atc gtg gct gtg gtc cgc gga tcc ctc ttt ttt ttc cca ctg cct ctg 480
 Ile Val Ala Val Val Arg Gly Ser Leu Phe Phe Phe Pro Leu Pro Leu
 145 150 155 160

ctg atc aag cgg ctg gcc ttc tgc cac tcc aat gtc ctc tcg cac tcc 528
 Leu Ile Lys Arg Leu Ala Phe Cys His Ser Asn Val Leu Ser His Ser
 165 170 175

tat tgt gtc cac cag gat gta atg aag ttg gcc tat gca gac act ttg 576
 Tyr Cys Val His Gln Asp Val Met Lys Leu Ala Tyr Ala Asp Thr Leu

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180 185 190
 ccc aat gtg gta tat ggt ctt act gcc att ctg ctg gtc atg ggc gtg 624
 Pro Asn Val Val Tyr Gly Leu Thr Ala Ile Leu Leu Val Met Gly Val
 195 200 205
 gac gta atg ttc atc tcc ttg tcc tat ttt ctg ata ata cga acg gtt 672
 Asp Val Met Phe Ile Ser Leu Ser Tyr Phe Leu Ile Ile Arg Thr Val
 210 215 220
 ctg caa ctg cct tcc aag tca gag cgg gcc aag gcc ttt gga acc tgt 720
 Leu Gln Leu Pro Ser Lys Ser Glu Arg Ala Lys Ala Phe Gly Thr Cys
 225 230 235 240
 gtg tca cac att ggt gtg gta ctc gcc ttc tat gtg cca ctt att ggc 768
 Val Ser His Ile Gly Val Val Leu Ala Phe Tyr Val Pro Leu Ile Gly
 245 250 255
 ctc tca gtt gta cac cgc ttt gga aac agc ctt cat ccc att gtg cgt 816
 Leu Ser Val Val His Arg Phe Gly Asn Ser Leu His Pro Ile Val Arg
 260 265 270
 gtt gtc atg ggt gac atc tac ctg ctg ctg cct cct gtc atc aat ccc 864
 Val Val Met Gly Asp Ile Tyr Leu Leu Leu Pro Pro Val Ile Asn Pro
 275 280 285
 atc atc tat ggt gcc aaa acc aaa cag atc aga aca cgg gtg ctg gct 912
 Ile Ile Tyr Gly Ala Lys Thr Lys Gln Ile Arg Thr Arg Val Leu Ala
 290 295 300
 atg ttc aag atc agc tgt gac aag gac ttg cag gct gtg gga ggc aag 960
 Met Phe Lys Ile Ser Cys Asp Lys Asp Leu Gln Ala Val Gly Gly Lys
 305 310 315 320
 tga 963

<210> 108
 <211> 320
 <212> PRT
 <213> Homo Sapiens

<400> 108

Met Ser Ser Cys Asn Phe Thr His Ala Thr Cys Val Leu Ile Gly Ile
 1 5 10 15

Pro Gly Leu Glu Lys Ala His Phe Trp Val Gly Phe Pro Leu Leu Ser
 20 25 30

Met Tyr Val Val Ala Met Cys Gly Asn Cys Ile Val Val Phe Ile Val
 35 40 45

Arg Thr Glu Arg Ser Leu His Ala Pro Met Tyr Leu Phe Leu Cys Met
 50 55 60

Leu Ala Ala Ile Asp Leu Ala Leu Ser Thr Ser Thr Met Pro Lys Ile

65		70		75		80
Leu Ala Leu Phe Trp Phe Asp Ser Arg Glu Ile Ser Ile Glu Ala Cys	85		90		95	
Leu Thr Gln Met Phe Phe Ile His Ala Leu Ser Ala Ile Glu Ser Thr	100		105		110	
Ile Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro	115		120		125	
Leu Arg His Ala Ala Val Leu Asn Asn Thr Val Thr Ala Gln Ile Gly	130		135		140	
Ile Val Ala Val Val Arg Gly Ser Leu Phe Phe Phe Pro Leu Pro Leu	145		150		155	160
Leu Ile Lys Arg Leu Ala Phe Cys His Ser Asn Val Leu Ser His Ser	165		170		175	
Tyr Cys Val His Gln Asp Val Met Lys Leu Ala Tyr Ala Asp Thr Leu	180		185		190	
Pro Asn Val Val Tyr Gly Leu Thr Ala Ile Leu Leu Val Met Gly Val	195		200		205	
Asp Val Met Phe Ile Ser Leu Ser Tyr Phe Leu Ile Ile Arg Thr Val	210		215		220	
Leu Gln Leu Pro Ser Lys Ser Glu Arg Ala Lys Ala Phe Gly Thr Cys	225		230		235	240
Val Ser His Ile Gly Val Val Leu Ala Phe Tyr Val Pro Leu Ile Gly	245		250		255	
Leu Ser Val Val His Arg Phe Gly Asn Ser Leu His Pro Ile Val Arg	260		265		270	
Val Val Met Gly Asp Ile Tyr Leu Leu Leu Pro Pro Val Ile Asn Pro	275		280		285	
Ile Ile Tyr Gly Ala Lys Thr Lys Gln Ile Arg Thr Arg Val Leu Ala	290		295		300	
Met Phe Lys Ile Ser Cys Asp Lys Asp Leu Gln Ala Val Gly Gly Lys	305		310		315	320

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<210> 109
 <211> 933
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(930)
 <223>

<400> 109
 atg gca gcc aaa aac tct tct gtg aca gag ttt atc ctc gaa ggc tta 48
 Met Ala Ala Lys Asn Ser Ser Val Thr Glu Phe Ile Leu Glu Gly Leu 15
 1 5 10
 acc cac cag ccg gga ctg cgg atc ccc ctc ttc ttc ctg ttt ctg ggt 96
 Thr His Gln Pro Gly Leu Arg Ile Pro Leu Phe Phe Leu Phe Leu Gly 30
 20 25
 ttc tac acg gtc acc gtg gtg ggg aac ctg ggc ttg ata acc ctg att 144
 Phe Tyr Thr Val Thr Val Val Gly Asn Leu Gly Leu Ile Thr Leu Ile 45
 35 40
 ggg ctg aac tct cac ctg cac act ccc atg tac ttc ttc ctt ttt aac 192
 Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe Asn 60
 50 55
 ctc tct tta ata gat ttc tgt ttc tcc act acc atc act ccc aaa atg 240
 Leu Ser Leu Ile Asp Phe Cys Phe Ser Thr Thr Ile Thr Pro Lys Met 80
 65 70 75
 ctg atg agt ttt gtc tca agg aag aac atc att tcc ttc aca ggg tgt 288
 Leu Met Ser Phe Val Ser Arg Lys Asn Ile Ile Ser Phe Thr Gly Cys 95
 85 90
 atg act cag ctc ttc ttc ttc tgc ttc ttt gtc gtc tct gag tcc ttc 336
 Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Val Val Ser Glu Ser Phe 110
 100 105
 atc ctg tca gcg atg gcg tat gac cgc tac gtg gcc atc tgt aac cca 384
 Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro 125
 115 120
 ctg ttg tac aca gtc acc atg tct tgc cag gtg tgt ttg ctc ctt ttg 432
 Leu Leu Tyr Thr Val Thr Met Ser Cys Gln Val Cys Leu Leu Leu 140
 130 135
 ttg ggt gcc tat ggg atg ggg ttt gct ggg gcc atg gcc cac aca gga 480
 Leu Gly Ala Tyr Gly Met Gly Phe Ala Gly Ala Met Ala His Thr Gly 155
 145 150 155
 agc ata atg aac ctg acc ttc tgt gct gac aac ctt gtc aat cat ttc 528
 Ser Ile Met Asn Leu Thr Phe Cys Ala Asp Asn Leu Val Asn His Phe 175
 165 170
 atg tgt gac atc ctt cct ctc ctt gag ctc tcc tgc aac agc tct tac 576
 Met Cys Asp Ile Leu Pro Leu Leu Glu Leu Ser Cys Asn Ser Ser Tyr 190
 180 185

atg aat gag ctg gtg gtc ttt att gtg gtg gct gtt gac gtt gga atg 624
 Met Asn Glu Leu Val Val Phe Ile Val Val Ala Val Asp Val Gly Met
 195 200 205

ccc att gtc act gtc ttt att tct tat gcc ctc atc ctc tcc agc att 672
 Pro Ile Val Thr Val Phe Ile Ser Tyr Ala Leu Ile Leu Ser Ser Ile
 210 215 220

cta cac aac agt tct aca gaa ggc agg tcc aaa gcc ttt agt act tgc 720
 Leu His Asn Ser Ser Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
 225 230 235 240

agt tcc cac ata att gta gtt tct ctt ttc ttt ggt tct ggt gct ttc 768
 Ser Ser His Ile Ile Val Val Ser Leu Phe Phe Gly Ser Gly Ala Phe
 245 250 255

atg tat ctc aaa ccc ctt tcc atc ctg ccc ctc gag caa ggg aaa gtg 816
 Met Tyr Leu Lys Pro Leu Ser Ile Leu Pro Leu Glu Gln Gly Lys Val
 260 265 270

tcc tcc ctg ttc tat acc ata ata gtc ccc gtg tta aac cca tta atc 864
 Ser Ser Leu Phe Tyr Thr Ile Ile Val Pro Val Leu Asn Pro Leu Ile
 275 280 285

tat agc ttg agg aac aag gat gtc aaa gtt gcc ctg agg aga act ttg 912
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Arg Thr Leu
 290 295 300

ggc aga aaa atc ttt tct taa 933
 Gly Arg Lys Ile Phe Ser
 305 310

<210> 110
 <211> 310
 <212> PRT
 <213> Homo Sapiens

<400> 110

Met Ala Ala Lys Asn Ser Ser Val Thr Glu Phe Ile Leu Glu Gly Leu
 1 5 10 15

Thr His Gln Pro Gly Leu Arg Ile Pro Leu Phe Phe Leu Phe Leu Gly
 20 25 30

Phe Tyr Thr Val Thr Val Val Gly Asn Leu Gly Leu Ile Thr Leu Ile
 35 40 45

Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe Asn
 50 55 60

Leu Ser Leu Ile Asp Phe Cys Phe Ser Thr Thr Ile Thr Pro Lys Met
 65 70 75 80

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Leu Met Ser Phe Val Ser Arg Lys Asn Ile Ile Ser Phe Thr Gly Cys
 85 90 95

Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Val Val Ser Glu Ser Phe
 100 105 110

Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro
 115 120 125

Leu Leu Tyr Thr Val Thr Met Ser Cys Gln Val Cys Leu Leu Leu Leu
 130 135 140

Leu Gly Ala Tyr Gly Met Gly Phe Ala Gly Ala Met Ala His Thr Gly
 145 150 155 160

Ser Ile Met Asn Leu Thr Phe Cys Ala Asp Asn Leu Val Asn His Phe
 165 170 175

Met Cys Asp Ile Leu Pro Leu Leu Glu Leu Ser Cys Asn Ser Ser Tyr
 180 185 190

Met Asn Glu Leu Val Val Phe Ile Val Val Ala Val Asp Val Gly Met
 195 200 205

Pro Ile Val Thr Val Phe Ile Ser Tyr Ala Leu Ile Leu Ser Ser Ile
 210 215 220

Leu His Asn Ser Ser Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
 225 230 235 240

Ser Ser His Ile Ile Val Val Ser Leu Phe Phe Gly Ser Gly Ala Phe
 245 250 255

Met Tyr Leu Lys Pro Leu Ser Ile Leu Pro Leu Glu Gln Gly Lys Val
 260 265 270

Ser Ser Leu Phe Tyr Thr Ile Ile Val Pro Val Leu Asn Pro Leu Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Arg Thr Leu
 290 295 300

Gly Arg Lys Ile Phe Ser
 305 310

<210> 111

<211> 951
 <212> DNA
 <213> Homo Sapiens

 <220>
 <221> CDS
 <222> (1) .. (948)
 <223>

 <400> 111
 atg cct taa atg aca atg gct gct gag aat tcc tcc ttc gtg aca cag 48
 Met Pro Met Thr Met Ala Ala Glu Asn Ser Ser Phe Val Thr Gln
 1 5 10 15
 ttt atc ctc gca ggc tta act gac caa ccg gga gtc cag atc ccc ctc 96
 Phe Ile Leu Ala Gly Leu Thr Asp Gln Pro Gly Val Gln Ile Pro Leu
 20 25 30
 ttc ttc ctg ttt cta ggc ttc tac gtg gtc act gtg gtg ggg aac ctg 144
 Phe Phe Leu Phe Leu Gly Phe Tyr Val Val Thr Val Val Gly Asn Leu
 35 40 45
 ggc ttg ata acc ctg ata agg ctc aac tct cac ttg cac acc cct atg 192
 Gly Leu Ile Thr Leu Ile Arg Leu Asn Ser His Leu His Thr Pro Met
 50 55 60
 tac ttc ttc ctc tat aac ttg tcc ttc ata gat ttc tgc tat tcc agt 240
 Tyr Phe Phe Leu Tyr Asn Leu Ser Phe Ile Asp Phe Cys Tyr Ser Ser
 65 70 75
 gtt atc act ccc aaa atg ctg atg agc ttt gtc tta aag aag aac agc 288
 Val Ile Thr Pro Lys Met Leu Met Ser Phe Val Leu Lys Lys Asn Ser
 80 85 90 95
 atc tcc tac gca ggg tgt atg act cag ctc ttc ttc ttt ctt ttc ttt 336
 Ile Ser Tyr Ala Gly Cys Met Thr Gln Leu Phe Phe Phe Leu Phe Phe
 100 105 110
 gtt gtc tct gag tcc ttc atc ctg tca gca atg gcg tat gac cgc tat 384
 Val Val Ser Glu Ser Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr
 115 120 125
 gtg gcc atc tgt aac cca ctg ttg tac atg gtc acc atg tct ccc cag 432
 Val Ala Ile Cys Asn Pro Leu Leu Tyr Met Val Thr Met Ser Pro Gln
 130 135 140
 gtg tgt ttt ctc ctt ttg ttg ggt gtc tat ggg atg ggg ttt gct ggg 480
 Val Cys Phe Leu Leu Leu Leu Gly Val Tyr Gly Met Gly Phe Ala Gly
 145 150 155
 gcc atg gcc cac aca gcg tgc atg atg ggt gtg acc ttc tgt gcc aat 528
 Ala Met Ala His Thr Ala Cys Met Met Gly Val Thr Phe Cys Ala Asn
 160 165 170 175
 aac ctt gtc aac cac tac atg tgt gac atc ctt ccc ctt ctt gag tgt 576
 Asn Leu Val Asn His Tyr Met Cys Asp Ile Leu Pro Leu Leu Glu Cys
 180 185 190
 gct tgc acc agc acc tat gtg aat gag ctt gta gtg ttt gtt gtt gtg 624
 Ala Cys Thr Ser Thr Tyr Val Asn Glu Leu Val Val Phe Val Val Val

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<210> 112
<211> 313
<212> PRT
<213> Homo Sapiens
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<400> 112
Met Thr Met Ala Ala Glu Asn Ser Ser Phe Val Thr Gln Phe Ile Leu
      5              10              15
1
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Ala Gly Leu Thr Asp Gln Pro Gly Val Gln Ile Pro Leu Phe Phe Leu
20 25 30

Phe Leu Gly Phe Tyr Val Val Thr Val Val Gly Asn Leu Gly Leu Ile
35 40 45

Thr Leu Ile Arg Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe
50 55 60

Leu Tyr Asn Leu Ser Phe Ile Asp Phe Cys Tyr Ser Ser Val Ile Thr
65 70 75 80

Pro Lys Met Leu Met Ser Phe Val Leu Lys Lys Asn Ser Ile Ser Tyr
85 90 95

Ala Gly Cys Met Thr Gln Leu Phe Phe Phe Leu Phe Phe Val Val Ser
 100 105 110

Glu Ser Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile
 115 120 125

Cys Asn Pro Leu Leu Tyr Met Val Thr Met Ser Pro Gln Val Cys Phe
 130 135 140

Leu Leu Leu Leu Gly Val Tyr Gly Met Gly Phe Ala Gly Ala Met Ala
 145 150 155 160

His Thr Ala Cys Met Met Gly Val Thr Phe Cys Ala Asn Asn Leu Val
 165 170 175

Asn His Tyr Met Cys Asp Ile Leu Pro Leu Leu Glu Cys Ala Cys Thr
 180 185 190

Ser Thr Tyr Val Asn Glu Leu Val Val Phe Val Val Val Gly Ile Asp
 195 200 205

Ile Gly Val Pro Thr Val Thr Ile Phe Ile Ser Tyr Ala Leu Ile Leu
 210 215 220

Ser Ser Ile Phe His Ile Asp Ser Thr Glu Gly Arg Ser Lys Ala Phe
 225 230 235 240

Ser Thr Cys Ser Ser His Ile Ile Ala Val Ser Leu Phe Phe Gly Ser
 245 250 255

Gly Ala Phe Met Tyr Leu Lys Pro Phe Ser Leu Leu Ala Met Asn Gln
 260 265 270

Gly Lys Val Ser Ser Leu Phe Tyr Thr Thr Val Val Pro Met Leu Asn
 275 280 285

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Lys
 290 295 300

Lys Ile Leu Asn Lys Asn Ala Phe Ser
 305 310

<210> 113

<211> 945

<212> DNA

<213> Homo Sapiens

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<220>

<221> CDS

<222> (1) .. (942)

<223>

<400> 113
 atg gaa aaa aga aat cta aca gtt gtc agg gaa ttc gtc ctt ctg gga 48
 Met Glu Lys Arg Asn Leu Thr Val Val Arg Glu Phe Val Leu Leu Gly 15
 1 5 10 15

ctt cct agc tca gca gag cag cag cac ctc ctg tct gtg ctc ttt ctc 96
 Leu Pro Ser Ser Ala Glu Gln Gln His Leu Leu Ser Val Leu Phe Leu 30
 20 25 30

tgt atg tat tta gcc acc acc ttg ggg aac atg ctc atc att gcg acg 144
 Cys Met Tyr Leu Ala Thr Thr Leu Gly Asn Met Leu Ile Ile Ala Thr 45
 35 40 45

att ggc ttt gac tct cac ctc cat tcc cct atg tac ttc ttc ctt agt 192
 Ile Gly Phe Asp Ser His Leu His Ser Pro Met Tyr Phe Phe Leu Ser 60
 50 55 60

aac ttg gcc ttt gtt gac atc tgc ttt acg tgc act aca gtc ccc caa 240
 Asn Leu Ala Phe Val Asp Ile Cys Phe Thr Ser Thr Thr Val Pro Gln 80
 65 70 75 80

atg gta gtg aat atc ttg act ggc acc aag act atc tct ttt gca ggc 288
 Met Val Val Asn Ile Leu Thr Gly Thr Lys Thr Ile Ser Phe Ala Gly 95
 85 90 95

tgc ctc acc cag ctc ttc ttc ttc gtt tct ttt gtg aat atg gac agc 336
 Cys Leu Thr Gln Leu Phe Phe Phe Val Ser Phe Val Asn Met Asp Ser 110
 100 105 110

ctc ctt ctg tgt gtg atg gcg tat gat aga tat gtg gcg att tgc cac 384
 Leu Leu Leu Cys Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His 125
 115 120 125

ccc tta cat tac acc gcc aga atg aac ctg tgc ctt tgt gtc cag cta 432
 Pro Leu His Tyr Thr Ala Arg Met Asn Leu Cys Leu Cys Val Gln Leu 140
 130 135 140

gtg gct gga ctg tgg ctt gtt act tac ctc cac gcc ctc ctg cat act 480
 Val Ala Gly Leu Trp Leu Val Thr Tyr Leu His Ala Leu Leu His Thr 160
 145 150 155 160

gtc cta ata gca cag ctg tcc ttc tgt gcc tcc aat atc atc cat cat 528
 Val Leu Ile Ala Gln Leu Ser Phe Cys Ala Ser Asn Ile Ile His His 175
 165 170 175

ttc ttc tgt gat ctc aat cct ctc ctg cag ctc tct tgc tct gac gtc 576
 Phe Phe Cys Asp Leu Asn Pro Leu Leu Gln Leu Ser Cys Ser Asp Val 190
 180 185 190

tcc ttc aat gta atg atc att ttt gca gta gga ggt cta ttg gct ctc 624
 Ser Phe Asn Val Met Ile Ile Phe Ala Val Gly Gly Leu Leu Ala Leu 205
 195 200 205

acg ccc ctt gtc tgt atc ctc gta tct tat gga ctt atc ttc tcc act 672

Thr Pro Leu Val Cys Ile Leu Val Ser Tyr Gly Leu Ile Phe Ser Thr
 210 215 220
 gtt ctg aag atc acc tct act cag ggc aag cag aga gct gtt tcc acc 720
 Val Leu Lys Ile Thr Ser Thr Gln Gly Lys Gln Arg Ala Val Ser Thr
 225 230 235 240
 tgc agc tgc cac ctg tca gtg gtg gtg ttg ttt tac ggc aca gcc atc 768
 Cys Ser Cys His Leu Ser Val Val Val Leu Phe Tyr Gly Thr Ala Ile
 245 250 255
 gcc gtc tat ttc agc cct tca tcc ccc cat atg cct gag agc gac act 816
 Ala Val Tyr Phe Ser Pro Ser Ser Pro His Met Pro Glu Ser Asp Thr
 260 265 270
 ctg tca acc atc atg tat tca atg gtg gct ccg atg ctg aat cct ttc 864
 Leu Ser Thr Ile Met Tyr Ser Met Val Ala Pro Met Leu Asn Pro Phe
 275 280 285
 atc tat acc cta agg aac agg gat atg aag agg gga ctt cag aaa atg 912
 Ile Tyr Thr Leu Arg Asn Arg Asp Met Lys Arg Gly Leu Gln Lys Met
 290 295 300
 ctt ctc aag tgc aca gtc ttt cag cag caa taa 945
 Leu Leu Lys Cys Thr Val Phe Gln Gln Gln
 305 310

<210> 114
 <211> 314
 <212> PRT
 <213> Homo Sapiens

<400> 114

Met Glu Lys Arg Asn Leu Thr Val Val Arg Glu Phe Val Leu Leu Gly
 1 5 10 15

Leu Pro Ser Ser Ala Glu Gln Gln His Leu Leu Ser Val Leu Phe Leu
 20 25 30

Cys Met Tyr Leu Ala Thr Thr Leu Gly Asn Met Leu Ile Ile Ala Thr
 35 40 45

Ile Gly Phe Asp Ser His Leu His Ser Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Asn Leu Ala Phe Val Asp Ile Cys Phe Thr Ser Thr Thr Val Pro Gln
 65 70 75 80

Met Val Val Asn Ile Leu Thr Gly Thr Lys Thr Ile Ser Phe Ala Gly
 85 90 95

Cys Leu Thr Gln Leu Phe Phe Phe Val Ser Phe Val Asn Met Asp Ser
 100 105 110

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Leu Leu Leu Cys Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu His Tyr Thr Ala Arg Met Asn Leu Cys Leu Cys Val Gln Leu
 130 135 140

Val Ala Gly Leu Trp Leu Val Thr Tyr Leu His Ala Leu Leu His Thr
 145 150 155 160

Val Leu Ile Ala Gln Leu Ser Phe Cys Ala Ser Asn Ile Ile His His
 165 170 175

Phe Phe Cys Asp Leu Asn Pro Leu Leu Gln Leu Ser Cys Ser Asp Val
 180 185 190

Ser Phe Asn Val Met Ile Ile Phe Ala Val Gly Gly Leu Leu Ala Leu
 195 200 205

Thr Pro Leu Val Cys Ile Leu Val Ser Tyr Gly Leu Ile Phe Ser Thr
 210 215 220

Val Leu Lys Ile Thr Ser Thr Gln Gly Lys Gln Arg Ala Val Ser Thr
 225 230 235 240

Cys Ser Cys His Leu Ser Val Val Val Leu Phe Tyr Gly Thr Ala Ile
 245 250 255

Ala Val Tyr Phe Ser Pro Ser Ser Pro His Met Pro Glu Ser Asp Thr
 260 265 270

Leu Ser Thr Ile Met Tyr Ser Met Val Ala Pro Met Leu Asn Pro Phe
 275 280 285

Ile Tyr Thr Leu Arg Asn Arg Asp Met Lys Arg Gly Leu Gln Lys Met
 290 295 300

Leu Leu Lys Cys Thr Val Phe Gln Gln Gln
 305 310

<210> 115
 <211> 930
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS

<222> (1) .. (927)

<223>

<400> 115

atg gca aat ctc aca atc gtg act gaa ttt atc ctt atg ggg ttt tct	48
Met Ala Asn Leu Thr Ile Val Thr Glu Phe Ile Leu Met Gly Phe Ser	
1 5 10 15	

acc aat aaa aat atg tgc att ttg cat tgc att ctc ttc ttg ttg att	96
Thr Asn Lys Asn Met Cys Ile Leu His Ser Ile Leu Phe Leu Leu Ile	
20 25 30	

tat ttg tgt gcc ctg atg ggg aat gtc ctc att atc atg atc aca act	144
Tyr Leu Cys Ala Leu Met Gly Asn Val Leu Ile Ile Met Ile Thr Thr	
35 40 45	

ttg gac cat cat ctc cac acc ccc gtg tat ttc ttc ttg aag aat cta	192
Leu Asp His His Leu His Thr Pro Val Tyr Phe Phe Leu Lys Asn Leu	
50 55 60	

tct ttc ttg gat ctc tgc ctt att tca gtc acg gct ccc aaa tct atc	240
Ser Phe Leu Asp Leu Cys Leu Ile Ser Val Thr Ala Pro Lys Ser Ile	
65 70 75 80	

gcc aat tct ttg ata cac aac aac tcc att tca ttc ctt ggc tgt gtt	288
Ala Asn Ser Leu Ile His Asn Asn Ser Ile Ser Phe Leu Gly Cys Val	
85 90 95	

tcc cag gtc ttt ttg ttg ctt tct tca gca tct gca gag ctg ctc ctc	336
Ser Gln Val Phe Leu Leu Leu Ser Ser Ala Ser Ala Glu Leu Leu Leu	
100 105 110	

ctc acg gtg atg tcc ttt gac cgc tat act gct ata tgt cac cct ctg	384
Leu Thr Val Met Ser Phe Asp Arg Tyr Thr Ala Ile Cys His Pro Leu	
115 120 125	

cac tat gat gtc atc atg gac agg agc acc tgt gtc caa aga gcc act	432
His Tyr Asp Val Ile Met Asp Arg Ser Thr Cys Val Gln Arg Ala Thr	
130 135 140	

gtg tct tgg ctg tat ggg ggt ctg att gct gtg atg cac aca gct ggc	480
Val Ser Trp Leu Tyr Gly Gly Leu Ile Ala Val Met His Thr Ala Gly	
145 150 155 160	

acc ttc tcc tta tcc tac tgt ggg tcc aac atg gtc cat cag ttc ttc	528
Thr Phe Ser Leu Ser Tyr Cys Gly Ser Asn Met Val His Gln Phe Phe	
165 170 175	

tgt gac att ccc cag tta tta gct att tct tgc tca gaa aat tta ata	576
Cys Asp Ile Pro Gln Leu Leu Ala Ile Ser Cys Ser Glu Asn Leu Ile	
180 185 190	

aga gaa att gca ctc atc ctt att aat gta gtt ttg gat ttc tgc tgt	624
Arg Glu Ile Ala Leu Ile Leu Ile Asn Val Val Leu Asp Phe Cys Cys	
195 200 205	

ttt att gtc atc atc att acc tat gtc cac gtc ttc tct aca gtc aag	672
Phe Ile Val Ile Ile Ile Thr Tyr Val His Val Phe Ser Thr Val Lys	
210 215 220	

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aag atc cct tcc aca gaa ggc cag tca aaa gcc tac tct att tgc ctt 720
 Lys Ile Pro Ser Thr Glu Gly Gln Ser Lys Ala Tyr Ser Ile Cys Leu 240
 225 230 235
 cca cac ttg ctg gtt gtg tta ttt ctt tcc act gga ttc att gct tat 768
 Pro His Leu Leu Val Val Leu Phe Leu Ser Thr Gly Phe Ile Ala Tyr 255
 245 250
 ctg aag cca gct tca gag tct cct tct att ttg gat gct gta att tct 816
 Leu Lys Pro Ala Ser Glu Ser Pro Ser Ile Leu Asp Ala Val Ile Ser 270
 260 265
 gtg ttc tac act atg ctg ccc cca acc ttt aat ccc att ata tac agt 864
 Val Phe Tyr Thr Met Leu Pro Pro Thr Phe Asn Pro Ile Ile Tyr Ser 285
 275 280
 ttg aga aac aag gcc ata aag gtg gct ctg ggg atg ttg ata aag gga 912
 Leu Arg Asn Lys Ala Ile Lys Val Ala Leu Gly Met Leu Ile Lys Gly 300
 290 295
 aag ctc acc aaa aag taa 930
 Lys Leu Thr Lys Lys
 305

<210> 116
 <211> 309
 <212> PRT
 <213> Homo Sapiens

<400> 116

Met Ala Asn Leu Thr Ile Val Thr Glu Phe Ile Leu Met Gly Phe Ser 15
 1 5 10

Thr Asn Lys Asn Met Cys Ile Leu His Ser Ile Leu Phe Leu Leu Ile 30
 20 25

Tyr Leu Cys Ala Leu Met Gly Asn Val Leu Ile Ile Met Ile Thr Thr 45
 35 40

Leu Asp His His Leu His Thr Pro Val Tyr Phe Phe Leu Lys Asn Leu 60
 50 55

Ser Phe Leu Asp Leu Cys Leu Ile Ser Val Thr Ala Pro Lys Ser Ile 80
 65 70 75

Ala Asn Ser Leu Ile His Asn Asn Ser Ile Ser Phe Leu Gly Cys Val 95
 85 90

Ser Gln Val Phe Leu Leu Leu Ser Ser Ala Ser Ala Glu Leu Leu Leu 110
 100 105

Leu Thr Val Met Ser Phe Asp Arg Tyr Thr Ala Ile Cys His Pro Leu

115 120 125
 His Tyr Asp Val Ile Met Asp Arg Ser Thr Cys Val Gln Arg Ala Thr
 130 135 140

 Val Ser Trp Leu Tyr Gly Gly Leu Ile Ala Val Met His Thr Ala Gly
 145 150 155 160

 Thr Phe Ser Leu Ser Tyr Cys Gly Ser Asn Met Val His Gln Phe Phe
 165 170 175

 Cys Asp Ile Pro Gln Leu Leu Ala Ile Ser Cys Ser Glu Asn Leu Ile
 180 185 190

 Arg Glu Ile Ala Leu Ile Leu Ile Asn Val Val Leu Asp Phe Cys Cys
 195 200 205

 Phe Ile Val Ile Ile Ile Thr Tyr Val His Val Phe Ser Thr Val Lys
 210 215 220

 Lys Ile Pro Ser Thr Glu Gly Gln Ser Lys Ala Tyr Ser Ile Cys Leu
 225 230 235 240

 Pro His Leu Leu Val Val Leu Phe Leu Ser Thr Gly Phe Ile Ala Tyr
 245 250 255

 Leu Lys Pro Ala Ser Glu Ser Pro Ser Ile Leu Asp Ala Val Ile Ser
 260 265 270

 Val Phe Tyr Thr Met Leu Pro Pro Thr Phe Asn Pro Ile Ile Tyr Ser
 275 280 285

 Leu Arg Asn Lys Ala Ile Lys Val Ala Leu Gly Met Leu Ile Lys Gly
 290 295 300

 Lys Leu Thr Lys Lys
 305

<210> 117
 <211> 966
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (963)
 <223>

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<400> 117
 atg ccc ata ctt atg gct ata gga aac tgg aca gaa ata agt gaa ttt 48
 Met Pro Ile Leu Met Ala Ile Gly Asn Trp Thr Glu Ile Ser Glu Phe 15
 1 5 10
 atc ctc atg agc ttc tct tcc cta cct act gaa ata cag tca ttg ctc 96
 Ile Leu Met Ser Phe Ser Ser Leu Pro Thr Glu Ile Gln Ser Leu Leu 30
 20 25
 ttc ctg aca ttt cta act atc tat ttg gtt act ctg aag gga aac agc 144
 Phe Leu Thr Phe Leu Thr Ile Tyr Leu Val Thr Leu Lys Gly Asn Ser 45
 35 40
 ctc atc att ctg gtt acc cta gct gac ccc atg cta cac agc ccc atg 192
 Leu Ile Ile Leu Val Thr Leu Ala Asp Pro Met Leu His Ser Pro Met 60
 50 55
 tac ttc ttc ctc aga aac tta tct ttc ctg gag att ggc ttc aac cta 240
 Tyr Phe Phe Leu Arg Asn Leu Ser Phe Leu Glu Ile Gly Phe Asn Leu 80
 65 70 75
 gtc att gtg ccc aaa atg ctg ggg acc ctg ctt gcc cag gac aca acc 288
 Val Ile Val Pro Lys Met Leu Gly Thr Leu Leu Ala Gln Asp Thr Thr 95
 85 90
 atc tcc ttc ctt ggc tgt gcc act cag atg tat ttc ttc ttc ttc ttt 336
 Ile Ser Phe Leu Gly Cys Ala Thr Gln Met Tyr Phe Phe Phe Phe Phe 110
 100 105
 ggg gta gct gaa tgc ttc ctc ctg gct acc atg gca tat gac cgc tat 384
 Gly Val Ala Glu Cys Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr 125
 115 120
 gtg gcc atc tgc agt ccc ttg cac tac cca gtc atc atg aac caa agg 432
 Val Ala Ile Cys Ser Pro Leu His Tyr Pro Val Ile Met Asn Gln Arg 140
 130 135
 aca cgg gcc aaa ctg gct gct gct tcc tgg ttc cca ggc ttt cct gta 480
 Thr Arg Ala Lys Leu Ala Ala Ala Ser Trp Phe Pro Gly Phe Pro Val 160
 145 150 155
 gct act gtg cag acc aca tgg ctc ttc agt ttt cca ttc tgt ggc acc 528
 Ala Thr Val Gln Thr Thr Trp Leu Phe Ser Phe Pro Phe Cys Gly Thr 175
 165 170
 aac aag gtg aac cac ttc ttc tgt gac agc ccg cct gtg ctg aag ctg 576
 Asn Lys Val Asn His Phe Phe Cys Asp Ser Pro Pro Val Leu Lys Leu 190
 180 185
 gtc tgt gca gac aca gca ctg ttt gag atc tac gcc atc gtc gga acc 624
 Val Cys Ala Asp Thr Ala Leu Phe Glu Ile Tyr Ala Ile Val Gly Thr 205
 195 200
 att ctg gtg gtc atg atc ccc tgc ttg ctg atc ttg tgt tcc tat act 672
 Ile Leu Val Val Met Ile Pro Cys Leu Leu Ile Leu Cys Ser Tyr Thr 220
 210 215
 cgc att gct gct gct atc ctc aag atc cca tca gct aaa ggg aag cat 720
 Arg Ile Ala Ala Ala Ile Leu Lys Ile Pro Ser Ala Lys Gly Lys His 240
 225 230 235

aaa gcc ttc tct acg tgc tcc tca cac ctc ctt gtt gtc tct ctt ttc 768
 Lys Ala Phe Ser Thr Cys Ser Ser His Leu Leu Val Val Ser Leu Phe
 245 250 255

 tat ata tct tct agc ctc acc tac ttc tgg cct aaa tca aat aat tct 816
 Tyr Ile Ser Ser Ser Leu Thr Tyr Phe Trp Pro Lys Ser Asn Asn Ser
 260 265 270

 cct gag agc aag aag ttg tta tca tta tcc tac act gtt gtg act ccc 864
 Pro Glu Ser Lys Lys Leu Leu Ser Leu Ser Tyr Thr Val Val Thr Pro
 275 280 285

 atg ttg aac ccc att atc tac agc ttg aga aat agc gag gtg aag aat 912
 Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Ser Glu Val Lys Asn
 290 295 300

 gcc ctc agc agg acc ttc cac aag gtc cta gcc ctc aga aac tgt atc 960
 Ala Leu Ser Arg Thr Phe His Lys Val Leu Ala Leu Arg Asn Cys Ile
 305 310 315 320

 cca tag 966
 Pro

<210> 118
 <211> 321
 <212> PRT
 <213> Homo Sapiens

<400> 118

Met Pro Ile Leu Met Ala Ile Gly Asn Trp Thr Glu Ile Ser Glu Phe
 1 5 10 15

 Ile Leu Met Ser Phe Ser Ser Leu Pro Thr Glu Ile Gln Ser Leu Leu
 20 25 30

 Phe Leu Thr Phe Leu Thr Ile Tyr Leu Val Thr Leu Lys Gly Asn Ser
 35 40 45

 Leu Ile Ile Leu Val Thr Leu Ala Asp Pro Met Leu His Ser Pro Met
 50 55 60

 Tyr Phe Phe Leu Arg Asn Leu Ser Phe Leu Glu Ile Gly Phe Asn Leu
 65 70 75 80

 Val Ile Val Pro Lys Met Leu Gly Thr Leu Leu Ala Gln Asp Thr Thr
 85 90 95

 Ile Ser Phe Leu Gly Cys Ala Thr Gln Met Tyr Phe Phe Phe Phe Phe
 100 105 110

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Gly Val Ala Glu Cys Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr
 115 120 125

Val Ala Ile Cys Ser Pro Leu His Tyr Pro Val Ile Met Asn Gln Arg
 130 135 140

Thr Arg Ala Lys Leu Ala Ala Ala Ser Trp Phe Pro Gly Phe Pro Val
 145 150 155 160

Ala Thr Val Gln Thr Thr Trp Leu Phe Ser Phe Pro Phe Cys Gly Thr
 165 170 175

Asn Lys Val Asn His Phe Phe Cys Asp Ser Pro Pro Val Leu Lys Leu
 180 185 190

Val Cys Ala Asp Thr Ala Leu Phe Glu Ile Tyr Ala Ile Val Gly Thr
 195 200 205

Ile Leu Val Val Met Ile Pro Cys Leu Leu Ile Leu Cys Ser Tyr Thr
 210 215 220

Arg Ile Ala Ala Ala Ile Leu Lys Ile Pro Ser Ala Lys Gly Lys His
 225 230 235 240

Lys Ala Phe Ser Thr Cys Ser Ser His Leu Leu Val Val Ser Leu Phe
 245 250 255

Tyr Ile Ser Ser Ser Leu Thr Tyr Phe Trp Pro Lys Ser Asn Asn Ser
 260 265 270

Pro Glu Ser Lys Lys Leu Leu Ser Leu Ser Tyr Thr Val Val Thr Pro
 275 280 285

Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Ser Glu Val Lys Asn
 290 295 300

Ala Leu Ser Arg Thr Phe His Lys Val Leu Ala Leu Arg Asn Cys Ile
 305 310 315 320

Pro

<210> 119
 <211> 933
 <212> DNA
 <213> Homo Sapiens

<220>

<221> CDS

<222> (1) .. (930)

<223>

<400> 119

caa act atg aga cag ata aat cag aca caa gtg aca gaa ttc ctc ctt	48
Gln Thr Met Arg Gln Ile Asn Gln Thr Gln Val Thr Glu Phe Leu Leu	
1 5 10 15	
ctg gga ctc tct gat ggg cca cac acc gag cag ctg cta ttt atc gta	96
Leu Gly Leu Ser Asp Gly Pro His Thr Glu Gln Leu Leu Phe Ile Val	
20 25 30	
tta ttg ggt gtc tac ctg gtc act gtg ctt gga aat ctg ctt cta atc	144
Leu Leu Gly Val Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile	
35 40 45	
tcc ctt gtt cat gtt gac tcc caa ctt cac aca ccc atg tat ttt ttt	192
Ser Leu Val His Val Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe	
50 55 60	
ctc tgc aac ttg tct ctg gct gac ctc tgt ttc tct acc aac ata gtt	240
Leu Cys Asn Leu Ser Leu Ala Asp Leu Cys Phe Ser Thr Asn Ile Val	
65 70 75 80	
cct cag gca cta gtc cac ctg ctt tcc aga aag aag gtc att gca ttc	288
Pro Gln Ala Leu Val His Leu Leu Ser Arg Lys Lys Val Ile Ala Phe	
85 90 95	
aca ctt tgc gca gct cga ctt ctc ttt ttc ctc att ttt ggg tgt acc	336
Thr Leu Cys Ala Ala Arg Leu Leu Phe Phe Leu Ile Phe Gly Cys Thr	
100 105 110	
cag tgc gcc ctt ctt gca gtg atg tcc tat gat cgc tat gtt gca atc	384
Gln Cys Ala Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Ile	
115 120 125	
tgc aat cct ctg cgt tac cct aac atc atg acc tgg aaa gtg tgt gtc	432
Cys Asn Pro Leu Arg Tyr Pro Asn Ile Met Thr Trp Lys Val Cys Val	
130 135 140	
cag ctg gca aca gga tca tgg acc agt ggc att ctg gtg tct gtg gta	480
Gln Leu Ala Thr Gly Ser Trp Thr Ser Gly Ile Leu Val Ser Val Val	
145 150 155 160	
gac acc acc ttc ata ctg agg cta ccc tac cga ggc agt aac agc att	528
Asp Thr Thr Phe Ile Leu Arg Leu Pro Tyr Arg Gly Ser Asn Ser Ile	
165 170 175	
gct cat ttc ttt tgt gag gcc cct gca cta ttg atc tta gca tcc aca	576
Ala His Phe Phe Cys Glu Ala Pro Ala Leu Leu Ile Leu Ala Ser Thr	
180 185 190	
gac acc cat gca tca gag atg gcc att ttt ctt atg ggg gtt gtg att	624
Asp Thr His Ala Ser Glu Met Ala Ile Phe Leu Met Gly Val Val Ile	
195 200 205	
ctc ctc ata cct gtt ttt ctg att ctg gta tcc tat ggc cgt atc ata	672
Leu Leu Ile Pro Val Phe Leu Ile Leu Val Ser Tyr Gly Arg Ile Ile	

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<210> 120
<211> 310
<212> PRT
<213> Homo Sapiens
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Gln Thr Met Arg Gln Ile Asn Gln Thr Gln Val Thr Glu Phe Leu Leu
1 5 10 15

Leu Gly Leu Ser Asp Gly Pro His Thr Glu Gln Leu Leu Phe Ile Val
20 25 30

Leu Leu Gly Val Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Leu Ile
35 40 45

Ser Leu Val His Val Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe
50 55 60

Leu Cys Asn Leu Ser Leu Ala Asp Leu Cys Phe Ser Thr Asn Ile Val
65 70 75 80

Pro Gln Ala Leu Val His Leu Leu Ser Arg Lys Lys Val Ile Ala Phe
85 90 95

Thr Leu Cys Ala Ala Arg Leu Leu Phe Phe Leu Ile Phe Gly Cys Thr
100 105 110

Gln Cys Ala Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Ile
 115 120 125

Cys Asn Pro Leu Arg Tyr Pro Asn Ile Met Thr Trp Lys Val Cys Val
 130 135 140

Gln Leu Ala Thr Gly Ser Trp Thr Ser Gly Ile Leu Val Ser Val Val
 145 150 155 160

Asp Thr Thr Phe Ile Leu Arg Leu Pro Tyr Arg Gly Ser Asn Ser Ile
 165 170 175

Ala His Phe Phe Cys Glu Ala Pro Ala Leu Leu Ile Leu Ala Ser Thr
 180 185 190

Asp Thr His Ala Ser Glu Met Ala Ile Phe Leu Met Gly Val Val Ile
 195 200 205

Leu Leu Ile Pro Val Phe Leu Ile Leu Val Ser Tyr Gly Arg Ile Ile
 210 215 220

Val Thr Val Val Lys Met Lys Ser Thr Val Gly Ser Leu Lys Ala Phe
 225 230 235 240

Ser Thr Cys Gly Ser His Leu Met Val Val Ile Leu Phe Tyr Gly Ser
 245 250 255

Ala Ile Ile Thr Tyr Met Thr Pro Lys Ser Ser Lys Gln Gln Glu Lys
 260 265 270

Ser Val Ser Val Phe Tyr Ala Ile Val Thr Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Ala Ala Leu Arg Lys Val
 290 295 300

Ala Thr Arg Asn Phe Pro
 305 310

<210> 121
 <211> 951
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(948)

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<223>

<400> 121 48
 atg gag ctc tgg aac ttc acc ttg gga agt ggc ttc att ttg gtg ggg
 Met Glu Leu Trp Asn Phe Thr Leu Gly Ser Gly Phe Ile Leu Val Gly
 1 5 10 15
 att ctg aat gac agt ggg tct cct gaa ctg ctc tgt gct aca att aca 96
 Ile Leu Asn Asp Ser Gly Ser Pro Glu Leu Leu Cys Ala Thr Ile Thr
 20 25 30
 atc cta tac ttg ttg gcc ctg atc agc aat ggc cta ctg ctc ctg gct 144
 Ile Leu Tyr Leu Leu Ala Leu Ile Ser Asn Gly Leu Leu Leu Leu Ala
 35 40 45
 atc acc atg gaa gcc cgg ctg cac atg ccc atg tac ctc ctg ctt ggg 192
 Ile Thr Met Glu Ala Arg Leu His Met Pro Met Tyr Leu Leu Leu Gly
 50 55 60
 cag ctc tct ctc atg gac ctc ctg ttc aca tct gtt gtc act ccc aag 240
 Gln Leu Ser Leu Met Asp Leu Leu Phe Thr Ser Val Val Thr Pro Lys
 65 70 75 80
 gcc ctt gcg gac ttt ctg cgc aga gaa aac acc atc tcc ttt gga ggc 288
 Ala Leu Ala Asp Phe Leu Arg Arg Glu Asn Thr Ile Ser Phe Gly Gly
 85 90 95
 tgt gcc ctt cag atg ttc ctg gca ctg aca atg ggt ggt gct gag gac 336
 Cys Ala Leu Gln Met Phe Leu Ala Leu Thr Met Gly Gly Ala Glu Asp
 100 105 110
 ctc cta ctg gcc ttc atg gcc tat gac agg tat gtg gcc att tgt cat 384
 Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 cct ctg aca tac atg acc ctc atg agc tca aga gcc tgc tgg ctc atg 432
 Pro Leu Thr Tyr Met Thr Leu Met Ser Ser Arg Ala Cys Trp Leu Met
 130 135 140
 gtg gcc acg tcc tgg atc ctg gca tcc cta agt gcc cta ata tat acc 480
 Val Ala Thr Ser Trp Ile Leu Ala Ser Leu Ser Ala Leu Ile Tyr Thr
 145 150 155 160
 gtg tat acc atg cac tat ccc ttc tgc agg gcc cag gag atc agg cat 528
 Val Tyr Thr Met His Tyr Pro Phe Cys Arg Ala Gln Glu Ile Arg His
 165 170 175
 ctt ctc tgt gag atc cca cac ttg ctg aag gtg gcc tgt gct gat acc 576
 Leu Leu Cys Glu Ile Pro His Leu Leu Lys Val Ala Cys Ala Asp Thr
 180 185 190
 tcc aga tat gag ctc atg gta tat gtg atg ggt gtg acc ttc ctg att 624
 Ser Arg Tyr Glu Leu Met Val Tyr Val Met Gly Val Thr Phe Leu Ile
 195 200 205
 ccc tct ctt gct gct ata ctg gcc tcc tat aca caa att cta ctc act 672
 Pro Ser Leu Ala Ala Ile Leu Ala Ser Tyr Thr Gln Ile Leu Leu Thr
 210 215 220
 gtg ctc cat atg cca tca aat gag ggg agg aag aaa gcc ctt gtc acc 720

Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
 225 230 235 240
 tgc tct tcc cac ctg act gtg gtt ggg atg ttc tat gga gct gcc aca 768
 Cys Ser Ser His Leu Thr Val Val Gly Met Phe Tyr Gly Ala Ala Thr
 245 250 255
 ttc atg tat gtc ttg ccc agt tcc ttc cac agc acc aga caa gac aac 816
 Phe Met Tyr Val Leu Pro Ser Ser Phe His Ser Thr Arg Gln Asp Asn
 260 265 270
 atc atc tct gtt ttc tac aca att gtc act cca gcc ctg aat cca ctc 864
 Ile Ile Ser Val Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu
 275 280 285
 atc tac agc ctg agg aat aag gag gtc atg cgg gcc ttg agg agg gtc 912
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Met Arg Ala Leu Arg Arg Val
 290 295 300
 ctg gga aaa tac atg ctg cca gca cac tcc acg ctc tag 951
 Leu Gly Lys Tyr Met Leu Pro Ala His Ser Thr Leu
 305 310 315

 <210> 122
 <211> 316
 <212> PRT
 <213> Homo Sapiens

 <400> 122

 Met Glu Leu Trp Asn Phe Thr Leu Gly Ser Gly Phe Ile Leu Val Gly
 1 5 10 15

 Ile Leu Asn Asp Ser Gly Ser Pro Glu Leu Leu Cys Ala Thr Ile Thr
 20 25 30

 Ile Leu Tyr Leu Leu Ala Leu Ile Ser Asn Gly Leu Leu Leu Leu Ala
 35 40 45

 Ile Thr Met Glu Ala Arg Leu His Met Pro Met Tyr Leu Leu Leu Gly
 50 55 60

 Gln Leu Ser Leu Met Asp Leu Leu Phe Thr Ser Val Val Thr Pro Lys
 65 70 75 80

 Ala Leu Ala Asp Phe Leu Arg Arg Glu Asn Thr Ile Ser Phe Gly Gly
 85 90 95

 Cys Ala Leu Gln Met Phe Leu Ala Leu Thr Met Gly Gly Ala Glu Asp
 100 105 110

 Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu Thr Tyr Met Thr Leu Met Ser Ser Arg Ala Cys Trp Leu Met
 130 135 140

Val Ala Thr Ser Trp Ile Leu Ala Ser Leu Ser Ala Leu Ile Tyr Thr
 145 150 155 160

Val Tyr Thr Met His Tyr Pro Phe Cys Arg Ala Gln Glu Ile Arg His
 165 170 175

Leu Leu Cys Glu Ile Pro His Leu Leu Lys Val Ala Cys Ala Asp Thr
 180 185 190

Ser Arg Tyr Glu Leu Met Val Tyr Val Met Gly Val Thr Phe Leu Ile
 195 200 205

Pro Ser Leu Ala Ala Ile Leu Ala Ser Tyr Thr Gln Ile Leu Leu Thr
 210 215 220

Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
 225 230 235 240

Cys Ser Ser His Leu Thr Val Val Gly Met Phe Tyr Gly Ala Ala Thr
 245 250 255

Phe Met Tyr Val Leu Pro Ser Ser Phe His Ser Thr Arg Gln Asp Asn
 260 265 270

Ile Ile Ser Val Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Met Arg Ala Leu Arg Arg Val
 290 295 300

Leu Gly Lys Tyr Met Leu Pro Ala His Ser Thr Leu
 305 310 315

<210> 123
 <211> 897
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(894)
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<400> 123																	
atg	aga	aat	cac	aca	atg	gtg	act	gaa	ttc	atc	ctt	ctg	gga	atc	cct		48
Met	Arg	Asn	His	Thr	Met	Val	Thr	Glu	Phe	Ile	Leu	Leu	Gly	Ile	Pro		
1				5					10					15			
gag	aca	gag	ggc	cta	gag	aca	gcc	ctt	tta	ttc	ctg	ttc	tcc	tca	ttt		96
Glu	Thr	Glu	Gly	Leu	Glu	Thr	Ala	Leu	Leu	Phe	Leu	Phe	Ser	Ser	Phe		
			20					25					30				
tat	tta	tgc	acc	ctc	ttg	gga	aac	gtg	ctt	atc	ctt	aca	gct	atc	atc		144
Tyr	Leu	Cys	Thr	Leu	Leu	Gly	Asn	Val	Leu	Ile	Leu	Thr	Ala	Ile	Ile		
		35					40					45					
tcc	tcc	act	cga	ctt	cac	act	cct	atg	tat	ttt	ttc	ttg	gga	aac	ctc		192
Ser	Ser	Thr	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Gly	Asn	Leu		
	50					55					60						
tcc	atc	ttt	gac	ctg	ggg	ttc	tct	tca	acg	act	ggt	ccc	aag	atg	ttg		240
Ser	Ile	Phe	Asp	Leu	Gly	Phe	Ser	Ser	Thr	Thr	Val	Pro	Lys	Met	Leu		
65					70					75				80			
ttc	tac	ctt	tcg	ggg	aac	agc	cat	gct	atc	tcg	tat	gca	ggc	tgc	gtg		288
Phe	Tyr	Leu	Ser	Gly	Asn	Ser	His	Ala	Ile	Ser	Tyr	Ala	Gly	Cys	Val		
				85					90					95			
tcc	cag	ctt	ttc	ttc	tac	cat	ttc	cta	ggc	tgt	act	gag	tgt	ttc	ctc		336
Ser	Gln	Leu	Phe	Phe	Tyr	His	Phe	Leu	Gly	Cys	Thr	Glu	Cys	Phe	Leu		
			100					105					110				
tac	aca	gtg	atg	gcc	tgt	gac	cgc	ttt	ggt	gcc	ata	tgt	ttt	cct	ttg		384
Tyr	Thr	Val	Met	Ala	Cys	Asp	Arg	Phe	Val	Ala	Ile	Cys	Phe	Pro	Leu		
		115					120					125					
aga	tac	acg	gtc	atc	atg	aac	cac	agg	gtg	tgc	ttt	atg	ttg	gcc	acg		432
Arg	Tyr	Thr	Val	Ile	Met	Asn	His	Arg	Val	Cys	Phe	Met	Leu	Ala	Thr		
		130				135					140						
ggg	acc	tgg	atg	att	ggc	tgt	gtc	cat	gcc	atg	atc	cta	act	ccc	ctc		480
Gly	Thr	Trp	Met	Ile	Gly	Cys	Val	His	Ala	Met	Ile	Leu	Thr	Pro	Leu		
145					150				155					160			
acc	ttc	cag	tta	cct	tac	tgt	ggc	cct	aac	aag	gtg	ggc	tat	tac	ttc		528
Thr	Phe	Gln	Leu	Pro	Tyr	Cys	Gly	Pro	Asn	Lys	Val	Gly	Tyr	Tyr	Phe		
				165				170						175			
tgt	gat	att	cct	gca	gtg	tta	cct	cta	gcc	tgt	aag	gac	aca	tcc	tta		576
Cys	Asp	Ile	Pro	Ala	Val	Leu	Pro	Leu	Ala	Cys	Lys	Asp	Thr	Ser	Leu		
			180				185						190				
gcc	cag	agg	gta	ggg	ttt	aca	aat	ggt	ggg	ctt	ttg	tct	ctc	att	tgc		624
Ala	Gln	Arg	Val	Gly	Phe	Thr	Asn	Val	Gly	Leu	Leu	Ser	Leu	Ile	Cys		
		195					200				205						
ttt	ttt	ctc	atc	ctt	ggt	tcc	tat	act	tgc	att	ggg	att	tcc	ata	tca		672
Phe	Phe	Leu	Ile	Leu	Val	Ser	Tyr	Thr	Cys	Ile	Gly	Ile	Ser	Ile	Ser		
		210				215					220						
aaa	atc	cgc	tca	gca	gag	ggc	agg	cag	cgg	gcc	ttc	tcc	acc	tgc	agc		720
Lys	Ile	Arg	Ser	Ala	Glu	Gly	Arg	Gln	Arg	Ala	Phe	Ser	Thr	Cys	Ser		
225					230					235				240			

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<210> 124
<211> 298
<212> PRT
<213> Homo Sapiens
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Met Arg Asn His Thr Met Val Thr Glu Phe Ile Leu Leu Gly Ile Pro
1 5 10 15

Glu Thr Glu Gly Leu Glu Thr Ala Leu Leu Phe Leu Phe Ser Ser Phe
20 25 30

Tyr Leu Cys Thr Leu Leu Gly Asn Val Leu Ile Leu Thr Ala Ile Ile
35 40 45

Ser Ser Thr Arg Leu His Thr Pro Met Tyr Phe Phe Leu Gly Asn Leu
50 55 60

Ser Ile Phe Asp Leu Gly Phe Ser Ser Thr Thr Val Pro Lys Met Leu
65 70 75 80

Phe Tyr Leu Ser Gly Asn Ser His Ala Ile Ser Tyr Ala Gly Cys Val
85 90 95

Ser Gln Leu Phe Phe Tyr His Phe Leu Gly Cys Thr Glu Cys Phe Leu
100 105 110

Tyr Thr Val Met Ala Cys Asp Arg Phe Val Ala Ile Cys Phe Pro Leu
115 120 125

Arg Tyr Thr Val Ile Met Asn His Arg Val Cys Phe Met Leu Ala Thr
130 135 140

Gly Thr Trp Met Ile Gly Cys Val His Ala Met Ile Leu Thr Pro Leu

145 150 155 160
 Thr Phe Gln Leu Pro Tyr Cys Gly Pro Asn Lys Val Gly Tyr Tyr Phe
 165 170 175
 Cys Asp Ile Pro Ala Val Leu Pro Leu Ala Cys Lys Asp Thr Ser Leu
 180 185 190
 Ala Gln Arg Val Gly Phe Thr Asn Val Gly Leu Leu Ser Leu Ile Cys
 195 200 205
 Phe Phe Leu Ile Leu Val Ser Tyr Thr Cys Ile Gly Ile Ser Ile Ser
 210 215 220
 Lys Ile Arg Ser Ala Glu Gly Arg Gln Arg Ala Phe Ser Thr Cys Ser
 225 230 235 240
 Ala His Leu Thr Ala Ile Leu Cys Ala Tyr Gly Pro Val Ile Val Ile
 245 250 255
 Tyr Leu Gln Pro Asn Pro Ser Ala Leu Leu Gly Ser Ile Ile Gln Ile
 260 265 270
 Leu Asn Asn Leu Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu
 275 280 285
 Arg Asn Lys Asp Val Lys Ser Asp Gln Pro
 290 295

<210> 125
 <211> 969
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (966)
 <223>

<400> 125
 atg aat tcc ctg aag gac ggg aat cac acc gct ctg acg ggg ttc atc 48
 Met Asn Ser Leu Lys Asp Gly Asn His Thr Ala Leu Thr Gly Phe Ile
 1 5 10 15
 cta ttg ggc tta aca gat gat cca atc ctt cga gtc atc ctc ttc atg 96
 Leu Leu Gly Leu Thr Asp Asp Pro Ile Leu Arg Val Ile Leu Phe Met
 20 25 30
 atc atc cta tct ggt aat ctc agc ata att att ctt atc aga att tct 144
 Ile Ile Leu Ser Gly Asn Leu Ser Ile Ile Ile Leu Ile Arg Ile Ser

35	40	45	
tct cag ctc cat cat cct atg tat ttc ttt ctg agc cac ttg gct ttt			192
Ser Gln Leu His His Pro Met Tyr Phe Phe Leu Ser His Leu Ala Phe			
50	55	60	
gct gac atg gcc tat tca tct tct gtc aca ccc aac atg ctt gta aac			240
Ala Asp Met Ala Tyr Ser Ser Ser Val Thr Pro Asn Met Leu Val Asn			
65	70	75	80
ttc ctg gtg gag aga aat aca gtc tcc tac ctt gga tgt gcc atc cag			288
Phe Leu Val Glu Arg Asn Thr Val Ser Tyr Leu Gly Cys Ala Ile Gln			
85	90	95	
ctt ggt tca gcg gct ttc ttt gca aca gtc gaa tgc gtc ctt ctg gct			336
Leu Gly Ser Ala Ala Phe Phe Ala Thr Val Glu Cys Val Leu Leu Ala			
100	105	110	
gcc atg gcc tat gac cgc ttt gtg gca att tgc agt cca ctg ctt tat			384
Ala Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Ser Pro Leu Leu Tyr			
115	120	125	
tca acc aaa atg tcc aca caa gtc agt gtc cag cta ctc tta gta gtt			432
Ser Thr Lys Met Ser Thr Gln Val Ser Val Gln Leu Leu Leu Val Val			
130	135	140	
tac ata gct ggt ttt ctc att gct gtc tcc tat act act tcc ttc tat			480
Tyr Ile Ala Gly Phe Leu Ile Ala Val Ser Tyr Thr Thr Ser Phe Tyr			
145	150	155	160
ttt tta ctc ttc tgt gga cca aat caa gtc aat cat ttt ttc tgt gat			528
Phe Leu Leu Phe Cys Gly Pro Asn Gln Val Asn His Phe Phe Cys Asp			
165	170	175	
ttc gct ccc tta ctt gaa ctc tcc tgt tct gat atc agt gtc tcc aca			576
Phe Ala Pro Leu Leu Glu Leu Ser Cys Ser Asp Ile Ser Val Ser Thr			
180	185	190	
gtt gtt ctc tca ttt tct tct gga tcc atc att gtg gtc act gtg tgt			624
Val Val Leu Ser Phe Ser Ser Gly Ser Ile Ile Val Val Thr Val Cys			
195	200	205	
gtc ata gcc gtc tgc tac atc tat atc ctc atc acc atc ctg aag atg			672
Val Ile Ala Val Cys Tyr Ile Tyr Ile Leu Ile Thr Ile Leu Lys Met			
210	215	220	
cgc tcc act gag ggg cac cac aag gcc ttc tcc acc tgc act tcc cac			720
Arg Ser Thr Glu Gly His His Lys Ala Phe Ser Thr Cys Thr Ser His			
225	230	235	240
ctc act gtg gtt acc ctg ttc tat ggg acc att acc ttc att tat gtg			768
Leu Thr Val Val Thr Leu Phe Tyr Gly Thr Ile Thr Phe Ile Tyr Val			
245	250	255	
atg ccc aat ttt agc tac tca act gac cag aac aag gtg gtg tct gtg			816
Met Pro Asn Phe Ser Tyr Ser Thr Asp Gln Asn Lys Val Val Ser Val			
260	265	270	
ttg tac aca gtg gtg att ccc atg ttg aac ccc ctg atc tac agc ctc			864
Leu Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu			
275	280	285	

agg aac aag gag att aag ggg gct ctg aag aga gag ctt gtt aga aaa 912
 Arg Asn Lys Glu Ile Lys Gly Ala Leu Lys Arg Glu Leu Val Arg Lys
 290 295 300

ata ctt tct cat gat gct tgt tat ttt agt aga act tca aat aat gat 960
 Ile Leu Ser His Asp Ala Cys Tyr Phe Ser Arg Thr Ser Asn Asn Asp
 305 310 315 320

att aca tag 969
 Ile Thr

<210> 126
 <211> 322
 <212> PRT
 <213> Homo Sapiens

<400> 126

Met Asn Ser Leu Lys Asp Gly Asn His Thr Ala Leu Thr Gly Phe Ile
 1 5 10 15

Leu Leu Gly Leu Thr Asp Asp Pro Ile Leu Arg Val Ile Leu Phe Met
 20 25 30

Ile Ile Leu Ser Gly Asn Leu Ser Ile Ile Ile Leu Ile Arg Ile Ser
 35 40 45

Ser Gln Leu His His Pro Met Tyr Phe Phe Leu Ser His Leu Ala Phe
 50 55 60

Ala Asp Met Ala Tyr Ser Ser Ser Val Thr Pro Asn Met Leu Val Asn
 65 70 75 80

Phe Leu Val Glu Arg Asn Thr Val Ser Tyr Leu Gly Cys Ala Ile Gln
 85 90 95

Leu Gly Ser Ala Ala Phe Phe Ala Thr Val Glu Cys Val Leu Leu Ala
 100 105 110

Ala Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Ser Pro Leu Leu Tyr
 115 120 125

Ser Thr Lys Met Ser Thr Gln Val Ser Val Gln Leu Leu Leu Val Val
 130 135 140

Tyr Ile Ala Gly Phe Leu Ile Ala Val Ser Tyr Thr Thr Ser Phe Tyr
 145 150 155 160

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Phe Leu Leu Phe Cys Gly Pro Asn Gln Val Asn His Phe Phe Cys Asp
 165 170 175

Phe Ala Pro Leu Leu Glu Leu Ser Cys Ser Asp Ile Ser Val Ser Thr
 180 185 190

Val Val Leu Ser Phe Ser Ser Gly Ser Ile Ile Val Val Thr Val Cys
 195 200 205

Val Ile Ala Val Cys Tyr Ile Tyr Ile Leu Ile Thr Ile Leu Lys Met
 210 215 220

Arg Ser Thr Glu Gly His His Lys Ala Phe Ser Thr Cys Thr Ser His
 225 230 235 240

Leu Thr Val Val Thr Leu Phe Tyr Gly Thr Ile Thr Phe Ile Tyr Val
 245 250 255

Met Pro Asn Phe Ser Tyr Ser Thr Asp Gln Asn Lys Val Val Ser Val
 260 265 270

Leu Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu
 275 280 285

Arg Asn Lys Glu Ile Lys Gly Ala Leu Lys Arg Glu Leu Val Arg Lys
 290 295 300

Ile Leu Ser His Asp Ala Cys Tyr Phe Ser Arg Thr Ser Asn Asn Asp
 305 310 315 320

Ile Thr

<210> 127
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(942)
 <223>

<400> 127
 atg gag aat aat aca gag gtg agt gaa ttc atc ctg ctt ggt cta acc
 Met Glu Asn Asn Thr Glu Val Ser Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15

aat gcc cca gaa cta cag gtt ccc ctc ttt atc atg ttt acc ctc atc

48

96

Asn	Ala	Pro	Glu	Leu	Gln	Val	Pro	Leu	Phe	Ile	Met	Phe	Thr	Leu	Ile		
			20					25					30				
tac	ctc	atc	act	ctg	act	ggg	aac	ctg	ggg	atg	atc	ata	tta	atc	ctg	144	
Tyr	Leu	Ile	Thr	Leu	Thr	Gly	Asn	Leu	Gly	Met	Ile	Ile	Leu	Ile	Leu		
		35					40				45						
ctg	gac	tct	cat	ctc	cac	act	ccc	atg	tac	ttt	ttt	ctc	agt	aac	ctg	192	
Leu	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ser	Asn	Leu		
	50					55				60							
tct	ctt	gca	ggc	att	ggg	tac	tcc	tca	gct	gtc	act	cca	aag	gtt	tta	240	
Ser	Leu	Ala	Gly	Ile	Gly	Tyr	Ser	Ser	Ala	Val	Thr	Pro	Lys	Val	Leu		
65					70				75					80			
act	ggg	ttg	ctt	ata	gaa	gac	aaa	gcc	atc	tcc	tac	agt	gcc	tgt	gct	288	
Thr	Gly	Leu	Leu	Ile	Glu	Asp	Lys	Ala	Ile	Ser	Tyr	Ser	Ala	Cys	Ala		
				85				90					95				
gct	cag	atg	ttc	ttt	tgt	gca	gtc	ttt	gcc	act	gtg	gaa	aat	tac	ctc	336	
Ala	Gln	Met	Phe	Phe	Cys	Ala	Val	Phe	Ala	Thr	Val	Glu	Asn	Tyr	Leu		
			100				105						110				
ttg	tcc	tca	atg	gcc	tat	gac	cgc	tac	gca	gca	gtg	tgt	aac	ccc	cta	384	
Leu	Ser	Ser	Met	Ala	Tyr	Asp	Arg	Tyr	Ala	Ala	Val	Cys	Asn	Pro	Leu		
			115				120					125					
cat	tat	acc	acc	acc	atg	aca	aca	cgt	gtg	tgt	gct	tgt	ctg	gct	ata	432	
His	Tyr	Thr	Thr	Thr	Met	Thr	Thr	Arg	Val	Cys	Ala	Cys	Leu	Ala	Ile		
						135					140						
ggc	tgt	tat	gtc	att	ggg	ttt	ctg	aat	gct	tct	atc	caa	att	gga	gat	480	
Gly	Cys	Tyr	Val	Ile	Gly	Phe	Leu	Asn	Ala	Ser	Ile	Gln	Ile	Gly	Asp		
145					150				155					160			
aca	ttt	cgc	ctc	tct	ttc	tgc	atg	tcc	aat	gtg	att	cat	cac	ttt	ttc	528	
Thr	Phe	Arg	Leu	Ser	Phe	Cys	Met	Ser	Asn	Val	Ile	His	His	Phe	Phe		
				165				170						175			
tgt	gac	aaa	cca	gca	gtc	att	act	ctg	acc	tgc	tct	gag	aaa	cac	att	576	
Cys	Asp	Lys	Pro	Ala	Val	Ile	Thr	Leu	Thr	Cys	Ser	Glu	Lys	His	Ile		
			180					185					190				
agt	gag	ttg	att	ctt	gtt	ctt	ata	tca	agt	ttt	aat	gtc	ttt	ttt	gca	624	
Ser	Glu	Leu	Ile	Leu	Val	Leu	Ile	Ser	Ser	Phe	Asn	Val	Phe	Phe	Ala		
			195				200					205					
ctt	ctt	gtt	acc	ttg	att	tcc	tat	ctg	ttc	ata	ttg	atc	acc	att	ctt	672	
Leu	Leu	Val	Thr	Leu	Ile	Ser	Tyr	Leu	Phe	Ile	Leu	Ile	Thr	Ile	Leu		
		210				215					220						
aag	agg	cac	aca	ggg	aag	gga	tac	cag	aag	cct	tta	tct	acc	tgt	ggg	720	
Lys	Arg	His	Thr	Gly	Lys	Gly	Tyr	Gln	Lys	Pro	Leu	Ser	Thr	Cys	Gly		
225					230				235					240			
tct	cac	ctc	att	gcc	att	ttc	tta	ttt	tat	ata	act	gtc	atc	atc	atg	768	
Ser	His	Leu	Ile	Ala	Ile	Phe	Leu	Phe	Tyr	Ile	Thr	Val	Ile	Ile	Met		
				245				250					255				
tac	ata	cga	cca	agt	tcc	agt	cat	tcc	atg	gac	aca	gac	aaa	att	gca	816	
Tyr	Ile	Arg	Pro	Ser	Ser	Ser	His	Ser	Met	Asp	Thr	Asp	Lys	Ile	Ala		

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<210> 128
<211> 314
<212> PRT
<213> Homo Sapiens
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Met Glu Asn Asn Thr Glu Val Ser Glu Phe Ile Leu Leu Gly Leu Thr
1 5 10 15

Asn Ala Pro Glu Leu Gln Val Pro Leu Phe Ile Met Phe Thr Leu Ile
20 25 30

Tyr Leu Ile Thr Leu Thr Gly Asn Leu Gly Met Ile Ile Leu Ile Leu
35 40 45

Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
50 55 60

Ser Leu Ala Gly Ile Gly Tyr Ser Ser Ala Val Thr Pro Lys Val Leu
65 70 75 80

Thr Gly Leu Leu Ile Glu Asp Lys Ala Ile Ser Tyr Ser Ala Cys Ala
85 90 95

Ala Gln Met Phe Phe Cys Ala Val Phe Ala Thr Val Glu Asn Tyr Leu
100 105 110

Leu Ser Ser Met Ala Tyr Asp Arg Tyr Ala Ala Val Cys Asn Pro Leu
115 120 125

His Tyr Thr Thr Thr Met Thr Thr Arg Val Cys Ala Cys Leu Ala Ile
130 135 140

Gly Cys Tyr Val Ile Gly Phe Leu Asn Ala Ser Ile Gln Ile Gly Asp
145 150 155 160

Thr Phe Arg Leu Ser Phe Cys Met Ser Asn Val Ile His His Phe Phe
 165 170 175

Cys Asp Lys Pro Ala Val Ile Thr Leu Thr Cys Ser Glu Lys His Ile
 180 185 190

Ser Glu Leu Ile Leu Val Leu Ile Ser Ser Phe Asn Val Phe Phe Ala
 195 200 205

Leu Leu Val Thr Leu Ile Ser Tyr Leu Phe Ile Leu Ile Thr Ile Leu
 210 215 220

Lys Arg His Thr Gly Lys Gly Tyr Gln Lys Pro Leu Ser Thr Cys Gly
 225 230 235 240

Ser His Leu Ile Ala Ile Phe Leu Phe Tyr Ile Thr Val Ile Ile Met
 245 250 255

Tyr Ile Arg Pro Ser Ser Ser His Ser Met Asp Thr Asp Lys Ile Ala
 260 265 270

Ser Val Phe Tyr Thr Met Ile Ile Pro Met Leu Ser Pro Ile Val Tyr
 275 280 285

Thr Leu Arg Asn Lys Asp Val Lys Asn Ala Phe Met Lys Val Val Glu
 290 295 300

Lys Ala Lys Tyr Ser Leu Asp Ser Val Phe
 305 310

<210> 129
 <211> 942
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(939)
 <223>

<400> 129
 atg gga aac tgg agc act gtg act gaa atc acc cta att gcc ttc cca 48
 Met Gly Asn Trp Ser Thr Val Thr Glu Ile Thr Leu Ile Ala Phe Pro
 1 5 10 15

gct ctc ctg gag att cga ata tct ctc ttc gtg gtt ctt gtg gta act 96
 Ala Leu Leu Glu Ile Arg Ile Ser Leu Phe Val Val Leu Val Val Thr
 20 25 30

tac aca tta aca gca aca gga aac atc acc atc atc tcc ctg ata tgg 144
 Tyr Thr Leu Thr Ala Thr Gly Asn Ile Thr Ile Ile Ser Leu Ile Trp
 35 40 45

att gat cat cgc ctg caa act cca atg tac ttc ttc ctc agt aat ttg 192
 Ile Asp His Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60

tcc ttt ctg gat atc tta tac acc act gtc att acc cca aag ttg ttg 240
 Ser Phe Leu Asp Ile Leu Tyr Thr Thr Val Ile Thr Pro Lys Leu Leu
 65 70 75 80

gcc tgc ctc cta gga gaa gag aaa acc ata tct ttt gct ggt tgc atg 288
 Ala Cys Leu Leu Gly Glu Glu Lys Thr Ile Ser Phe Ala Gly Cys Met
 85 90 95

atc caa aca tat ttc tac ttc ttt ctg ggg acg gtg gag ttt atc ctc 336
 Ile Gln Thr Tyr Phe Tyr Phe Phe Phe Leu Gly Thr Val Glu Phe Ile Leu
 100 105 110

ttg gcg gtg atg tcc ttt gac cgc tac atg gct atc tgc gac cca ctg 384
 Leu Ala Val Met Ser Phe Asp Arg Tyr Met Ala Ile Cys Asp Pro Leu
 115 120 125

cac tac acg gtc atc atg aac agc agg gcc tgc ctt ctg ctg gtt ctg 432
 His Tyr Thr Val Ile Met Asn Ser Arg Ala Cys Leu Leu Val Leu
 130 135 140

gga tgc tgg gtg gga gcc ttc ctg tct gtg ttg ttt cca acc att gta 480
 Gly Cys Trp Val Gly Ala Phe Leu Ser Val Leu Phe Pro Thr Ile Val
 145 150 155 160

gtg aca agg cta cct tac tgt agg aaa gaa att aat cat ttc ttc tgt 528
 Val Thr Arg Leu Pro Tyr Cys Arg Lys Glu Ile Asn His Phe Phe Cys
 165 170 175

gac att gcc cct ctt ctt cag gtg gcc tgt ata aat act cac ctc att 576
 Asp Ile Ala Pro Leu Leu Gln Val Ala Cys Ile Asn Thr His Leu Ile
 180 185 190

gag aag ata aac ttt ctc ctc tct gcc ctt gtc atc ctg agc tcc ctg 624
 Glu Lys Ile Asn Phe Leu Leu Ser Ala Leu Val Ile Leu Ser Ser Leu
 195 200 205

gca ttc act act ggg tcc tac gtg tac ata att tct acc atc ctg cgt 672
 Ala Phe Thr Thr Gly Ser Tyr Val Tyr Ile Ile Ser Thr Ile Leu Arg
 210 215 220

atc ccc tcc acc cag ggc cgt cag aaa gct ttt tct acc tgt gct tct 720
 Ile Pro Ser Thr Gln Gly Arg Gln Lys Ala Phe Ser Thr Cys Ala Ser
 225 230 235 240

cac atc act gtt gtc tcc att gcc cac ggg agc aac atc ttt gtg tat 768
 His Ile Thr Val Val Ser Ile Ala His Gly Ser Asn Ile Phe Val Tyr
 245 250 255

gtg aga ccc aat cag aac tcc tca ctg gat tat gac aag gtg gcc gct 816
 Val Arg Pro Asn Gln Asn Ser Ser Leu Asp Tyr Asp Lys Val Ala Ala
 260 265 270

gtc ctc atc aca gtg gtg acc cct ctc ctg aac cct ttt atc tac agc 864

Val Leu Ile Thr Val Val Thr Pro Leu Leu Asn Pro Phe Ile Tyr Ser
 275 280 285
 ttg agg aat gag aag gta cag gaa gtg ttg aga gag aca gtg aac aga 912
 Leu Arg Asn Glu Lys Val Gln Glu Val Leu Arg Glu Thr Val Asn Arg
 290 295 300
 atc atg acc ttg ata caa agg aaa act tga 942
 Ile Met Thr Leu Ile Gln Arg Lys Thr
 305 310
 <210> 130
 <211> 313
 <212> PRT
 <213> Homo Sapiens
 <400> 130
 Met Gly Asn Trp Ser Thr Val Thr Glu Ile Thr Leu Ile Ala Phe Pro
 1 5 10 15
 Ala Leu Leu Glu Ile Arg Ile Ser Leu Phe Val Val Leu Val Val Thr
 20 25 30
 Tyr Thr Leu Thr Ala Thr Gly Asn Ile Thr Ile Ile Ser Leu Ile Trp
 35 40 45
 Ile Asp His Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60
 Ser Phe Leu Asp Ile Leu Tyr Thr Thr Val Ile Thr Pro Lys Leu Leu
 65 70 75 80
 Ala Cys Leu Leu Gly Glu Glu Lys Thr Ile Ser Phe Ala Gly Cys Met
 85 90 95
 Ile Gln Thr Tyr Phe Tyr Phe Phe Leu Gly Thr Val Glu Phe Ile Leu
 100 105 110
 Leu Ala Val Met Ser Phe Asp Arg Tyr Met Ala Ile Cys Asp Pro Leu
 115 120 125
 His Tyr Thr Val Ile Met Asn Ser Arg Ala Cys Leu Leu Leu Val Leu
 130 135 140
 Gly Cys Trp Val Gly Ala Phe Leu Ser Val Leu Phe Pro Thr Ile Val
 145 150 155 160
 Val Thr Arg Leu Pro Tyr Cys Arg Lys Glu Ile Asn His Phe Phe Cys
 165 170 175

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Asp Ile Ala Pro Leu Leu Gln Val Ala Cys Ile Asn Thr His Leu Ile
180 185 190

Glu Lys Ile Asn Phe Leu Leu Ser Ala Leu Val Ile Leu Ser Ser Leu
195 200 205

Ala Phe Thr Thr Gly Ser Tyr Val Tyr Ile Ile Ser Thr Ile Leu Arg
210 215 220

Ile Pro Ser Thr Gln Gly Arg Gln Lys Ala Phe Ser Thr Cys Ala Ser
225 230 235 240

His Ile Thr Val Val Ser Ile Ala His Gly Ser Asn Ile Phe Val Tyr
245 250 255

Val Arg Pro Asn Gln Asn Ser Ser Leu Asp Tyr Asp Lys Val Ala Ala
260 265 270

Val Leu Ile Thr Val Val Thr Pro Leu Leu Asn Pro Phe Ile Tyr Ser
275 280 285

Leu Arg Asn Glu Lys Val Gln Glu Val Leu Arg Glu Thr Val Asn Arg
290 295 300

Ile Met Thr Leu Ile Gln Arg Lys Thr
305 310

<210> 131
<211> 945
<212> DNA
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<220>
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<223>

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atg tgg gaa aac tgg aca att gtc agt gaa ttt gtt ctc gtg agc ttc
Met Trp Glu Asn Trp Thr Ile Val Ser Glu Phe Val Leu Val Ser Phe
1 5 10 15

tca gcc ctg tcc act gag ctt cag gct cta ctg ttt ctc ctt ttc ttg 96
Ser Ala Leu Ser Thr Glu Leu Gln Ala Leu Leu Phe Leu Leu Phe Leu
20 25 30

acc att tac ttg gtt act tta atg ggc aat gtc ctc atc atc ctg gtc 144
Thr Ile Tyr Leu Val Thr Leu Met Gly Asn Val Leu Ile Ile Leu Val
35 40 45

act	ata	gct	gac	tct	gca	cta	caa	agt	cct	atg	tac	ttc	ttc	ctc	aga	192
Thr	Ile	Ala	Asp	Ser	Ala	Leu	Gln	Ser	Pro	Met	Tyr	Phe	Phe	Leu	Arg	
50						55					60					
aac	ttg	tcc	ttc	ctg	gag	ata	ggg	ttc	aac	ttg	gtc	att	gtg	ccc	aag	240
Asn	Leu	Ser	Phe	Leu	Glu	Ile	Gly	Phe	Asn	Leu	Val	Ile	Val	Pro	Lys	
65					70				75					80		
atg	ctg	ggg	acc	ctg	atc	att	caa	gac	aca	acc	atc	tcc	ttc	ctt	gga	288
Met	Leu	Gly	Thr	Leu	Ile	Ile	Gln	Asp	Thr	Thr	Ile	Ser	Phe	Leu	Gly	
				85					90					95		
tgt	gcc	act	cag	atg	tat	ttc	ttc	ttc	ttt	ttt	ggg	gct	gct	gag	tgc	336
Cys	Ala	Thr	Gln	Met	Tyr	Phe	Phe	Phe	Phe	Phe	Gly	Ala	Ala	Glu	Cys	
			100					105					110			
tgc	ctc	ctg	gcc	acc	atg	gca	tat	gac	cgc	tac	gtg	gcc	atc	tgt	gac	384
Cys	Leu	Leu	Ala	Thr	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asp	
		115					120					125				
ccc	ttg	cac	tac	cca	gtc	atc	atg	ggc	cac	ata	tcc	tgt	gcc	cag	ctg	432
Pro	Leu	His	Tyr	Pro	Val	Ile	Met	Gly	His	Ile	Ser	Cys	Ala	Gln	Leu	
	130					135					140					
gca	gct	gcc	tct	tgg	ttc	tca	ggg	ttt	tca	gtg	gcc	act	gtg	caa	acc	480
Ala	Ala	Ala	Ser	Trp	Phe	Ser	Gly	Phe	Ser	Val	Ala	Thr	Val	Gln	Thr	
145					150					155				160		
aca	tgg	att	ttc	agt	ttc	cct	ttt	tgt	ggc	ccc	aac	agg	gtg	aac	cac	528
Thr	Trp	Ile	Phe	Ser	Phe	Pro	Phe	Cys	Gly	Pro	Asn	Arg	Val	Asn	His	
				165					170					175		
ttc	ttc	tgt	gac	agc	cct	cct	gtt	att	gca	ctg	gtc	tgt	gct	gac	acc	576
Phe	Phe	Cys	Asp	Ser	Pro	Pro	Val	Ile	Ala	Leu	Val	Cys	Ala	Asp	Thr	
			180					185					190			
tct	gtg	ttt	gaa	ctg	gag	gct	ctg	aca	gcc	act	gtc	cca	ttc	att	ctc	624
Ser	Val	Phe	Glu	Leu	Glu	Ala	Leu	Thr	Ala	Thr	Val	Pro	Phe	Ile	Leu	
		195					200					205				
ttt	cct	ttc	ttg	ctg	atc	ctg	gga	tcc	tat	gtc	cgc	atc	ctc	tcc	act	672
Phe	Pro	Phe	Leu	Leu	Ile	Leu	Gly	Ser	Tyr	Val	Arg	Ile	Leu	Ser	Thr	
	210					215					220					
atc	ttc	agg	atg	ccg	tca	gct	gag	ggg	aaa	cat	cag	gca	ttc	tcc	acc	720
Ile	Phe	Arg	Met	Pro	Ser	Ala	Glu	Gly	Lys	His	Gln	Ala	Phe	Ser	Thr	
225				230						235				240		
tgt	tcc	gcc	cac	ctc	ttg	gtt	gtc	tct	ctc	ttc	tat	agc	act	gcc	atc	768
Cys	Ser	Ala	His	Leu	Leu	Val	Val	Ser	Leu	Phe	Tyr	Ser	Thr	Ala	Ile	
				245					250					255		
ctc	acg	tat	ttc	cga	ccc	caa	tcc	agt	gcc	tct	tct	gag	agc	aag	aag	816
Leu	Thr	Tyr	Phe	Arg	Pro	Gln	Ser	Ser	Ala	Ser	Ser	Glu	Ser	Lys	Lys	
			260					265					270			
ctg	ctg	tca	ctc	tct	tcc	aca	gtg	gtg	act	ccc	atg	ttg	aac	ccc	atc	864
Leu	Leu	Ser	Leu	Ser	Ser	Thr	Val	Val	Thr	Pro	Met	Leu	Asn	Pro	Ile	
		275					280					285				

atc tac agc tca agg aat aaa gaa gtg aag gct gca ctg aag cgg ctt 912
 ile Tyr Ser Ser Arg Asn Lys Glu Val Lys Ala Ala Leu Lys Arg Leu
 290 295 300

atc cac agg acc ctg ggc tct cag aaa cta tga 945
 ile His Arg Thr Leu Gly Ser Gln Lys Leu
 305 310

<210> 132
 <211> 314
 <212> PRT
 <213> Homo Sapiens

<400> 132

Met Trp Glu Asn Trp Thr Ile Val Ser Glu Phe Val Leu Val Ser Phe
 1 5 10 15

Ser Ala Leu Ser Thr Glu Leu Gln Ala Leu Leu Phe Leu Leu Phe Leu
 20 25 30

Thr Ile Tyr Leu Val Thr Leu Met Gly Asn Val Leu Ile Ile Leu Val
 35 40 45

Thr Ile Ala Asp Ser Ala Leu Gln Ser Pro Met Tyr Phe Phe Leu Arg
 50 55 60

Asn Leu Ser Phe Leu Glu Ile Gly Phe Asn Leu Val Ile Val Pro Lys
 65 70 75 80

Met Leu Gly Thr Leu Ile Ile Gln Asp Thr Thr Ile Ser Phe Leu Gly
 85 90 95

Cys Ala Thr Gln Met Tyr Phe Phe Phe Phe Phe Gly Ala Ala Glu Cys
 100 105 110

Cys Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asp
 115 120 125

Pro Leu His Tyr Pro Val Ile Met Gly His Ile Ser Cys Ala Gln Leu
 130 135 140

Ala Ala Ala Ser Trp Phe Ser Gly Phe Ser Val Ala Thr Val Gln Thr
 145 150 155 160

Thr Trp Ile Phe Ser Phe Pro Phe Cys Gly Pro Asn Arg Val Asn His
 165 170 175

Phe Phe Cys Asp Ser Pro Pro Val Ile Ala Leu Val Cys Ala Asp Thr

180 185 190
 Ser Val Phe Glu Leu Glu Ala Leu Thr Ala Thr Val Pro Phe Ile Leu
 195 200 205
 Phe Pro Phe Leu Leu Ile Leu Gly Ser Tyr Val Arg Ile Leu Ser Thr
 210 215 220
 Ile Phe Arg Met Pro Ser Ala Glu Gly Lys His Gln Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Leu Val Val Ser Leu Phe Tyr Ser Thr Ala Ile
 245 250 255
 Leu Thr Tyr Phe Arg Pro Gln Ser Ser Ala Ser Ser Glu Ser Lys Lys
 260 265 270
 Leu Leu Ser Leu Ser Ser Thr Val Val Thr Pro Met Leu Asn Pro Ile
 275 280 285
 Ile Tyr Ser Ser Arg Asn Lys Glu Val Lys Ala Ala Leu Lys Arg Leu
 290 295 300
 Ile His Arg Thr Leu Gly Ser Gln Lys Leu
 305 310

<210> 133
 <211> 939
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<220>
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 Met Glu Arg Val Asn Glu Thr Val Val Arg Glu Val Ile Phe Leu Gly
 1 5 10 15
 ttc tca tcc ctg gcc agg ctg cag cag ctg ctc ttt gtt atc ttc ctg 96
 Phe Ser Ser Leu Ala Arg Leu Gln Gln Leu Leu Phe Val Ile Phe Leu
 20 25 30
 ctc ctc tac ctg ttc act ctg ggc acc aat gca atc atc att tcc acc 144
 Leu Leu Tyr Leu Phe Thr Leu Gly Thr Asn Ala Ile Ile Ile Ser Thr
 35 40 45
 att gtc ctg gac agg gcc ctt cat atc ccc atg tac ttc ttc ctt gcc 192
 Ile Val Leu Asp Arg Ala Leu His Ile Pro Met Tyr Phe Phe Leu Ala

50	55	60	
atc ctc tct tgc tct gag att tgc tac acc ttc atc att gta ccc aag			240
Ile Leu Ser Cys Ser Glu Ile Cys Tyr Thr Phe Ile Ile Val Pro Lys			
65	70	75	80
atg ctg gtt gac ctg ctg tcc cag aag aag acc att tct ttc ctg ggc			288
Met Leu Val Asp Leu Leu Ser Gln Lys Lys Thr Ile Ser Phe Leu Gly			
	85	90	95
tgt gcc atc caa atg ttt tcc ttc ctc ttc ctt ggc tgc tct cac tcc			336
Cys Ala Ile Gln Met Phe Ser Phe Leu Phe Leu Gly Cys Ser His Ser			
	100	105	110
ttt ctg ctg gca gtc atg ggt tat gat cgt tac ata gcc atc tgt aac			384
Phe Leu Leu Ala Val Met Gly Tyr Asp Arg Tyr Ile Ala Ile Cys Asn			
	115	120	125
cca ctg cgc tac tca gtg cta atg gga cat ggg gtg tgt atg gga cta			432
Pro Leu Arg Tyr Ser Val Leu Met Gly His Gly Val Cys Met Gly Leu			
	130	135	140
gtg gct gct gcc tgt gcc tgt ggc ttc act gtt gca cag atc atc aca			480
Val Ala Ala Ala Cys Ala Cys Gly Phe Thr Val Ala Gln Ile Ile Thr			
	145	150	155
tcc ttg gta ttt cac ctg cct ttt tat tcc tcc aat caa cta cat cac			528
Ser Leu Val Phe His Leu Pro Phe Tyr Ser Ser Asn Gln Leu His His			
	165	170	175
ttc ttc tgt gac att gct cct gtc ctc aag ctg gca tct cac cat aac			576
Phe Phe Cys Asp Ile Ala Pro Val Leu Lys Leu Ala Ser His His Asn			
	180	185	190
cac ttt agt cag att gtc atc ttc atg ctc tgt aca ttg gtc ctg gct			624
His Phe Ser Gln Ile Val Ile Phe Met Leu Cys Thr Leu Val Leu Ala			
	195	200	205
atc ccc tta ttg ttg atc ttg gtg tcc tat gtt cac atc ctc tct gcc			672
Ile Pro Leu Leu Leu Ile Leu Val Ser Tyr Val His Ile Leu Ser Ala			
	210	215	220
ata ctt cag ttt cct tcc aca ctg ggt agg tgc aaa gct ttt tct acc			720
Ile Leu Gln Phe Pro Ser Thr Leu Gly Arg Cys Lys Ala Phe Ser Thr			
	225	230	235
tgt gta tct cac ctc att att gtc act gtc cac tat ggc tgt gcc tcc			768
Cys Val Ser His Leu Ile Ile Val Thr Val His Tyr Gly Cys Ala Ser			
	245	250	255
ttt atc tac tta agg cct cag tcc aac tac tcc tca agc cag gat gct			816
Phe Ile Tyr Leu Arg Pro Gln Ser Asn Tyr Ser Ser Ser Gln Asp Ala			
	260	265	270
cta ata tca gta tcc tac act att ata act cca ttg ttc aac cca atg			864
Leu Ile Ser Val Ser Tyr Thr Ile Ile Thr Pro Leu Phe Asn Pro Met			
	275	280	285
att tat agc ttg aga aat aaa gag ttc aaa tca gct ctt tgt aaa att			912
Ile Tyr Ser Leu Arg Asn Lys Glu Phe Lys Ser Ala Leu Cys Lys Ile			
	290	295	300

gtg aga aga aca att tcc ctg ttg taa
 Val Arg Arg Thr Ile Ser Leu Leu
 305 310

939

<210> 134
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 134

Met Glu Arg Val Asn Glu Thr Val Val Arg Glu Val Ile Phe Leu Gly
 1 5 10 15

Phe Ser Ser Leu Ala Arg Leu Gln Gln Leu Leu Phe Val Ile Phe Leu
 20 25 30

Leu Leu Tyr Leu Phe Thr Leu Gly Thr Asn Ala Ile Ile Ile Ser Thr
 35 40 45

Ile Val Leu Asp Arg Ala Leu His Ile Pro Met Tyr Phe Phe Leu Ala
 50 55 60

Ile Leu Ser Cys Ser Glu Ile Cys Tyr Thr Phe Ile Ile Val Pro Lys
 65 70 75 80

Met Leu Val Asp Leu Leu Ser Gln Lys Lys Thr Ile Ser Phe Leu Gly
 85 90 95

Cys Ala Ile Gln Met Phe Ser Phe Leu Phe Leu Gly Cys Ser His Ser
 100 105 110

Phe Leu Leu Ala Val Met Gly Tyr Asp Arg Tyr Ile Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Ser Val Leu Met Gly His Gly Val Cys Met Gly Leu
 130 135 140

Val Ala Ala Ala Cys Ala Cys Gly Phe Thr Val Ala Gln Ile Ile Thr
 145 150 155 160

Ser Leu Val Phe His Leu Pro Phe Tyr Ser Ser Asn Gln Leu His His
 165 170 175

Phe Phe Cys Asp Ile Ala Pro Val Leu Lys Leu Ala Ser His His Asn
 180 185 190

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His Phe Ser Gln Ile Val Ile Phe Met Leu Cys Thr Leu Val Leu Ala
 195 200 205

Ile Pro Leu Leu Leu Ile Leu Val Ser Tyr Val His Ile Leu Ser Ala
 210 215 220

Ile Leu Gln Phe Pro Ser Thr Leu Gly Arg Cys Lys Ala Phe Ser Thr
 225 230 235 240

Cys Val Ser His Leu Ile Ile Val Thr Val His Tyr Gly Cys Ala Ser
 245 250 255

Phe Ile Tyr Leu Arg Pro Gln Ser Asn Tyr Ser Ser Ser Gln Asp Ala
 260 265 270

Leu Ile Ser Val Ser Tyr Thr Ile Ile Thr Pro Leu Phe Asn Pro Met
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Phe Lys Ser Ala Leu Cys Lys Ile
 290 295 300

Val Arg Arg Thr Ile Ser Leu Leu
 305 310

<210> 135
 <211> 930
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(927)
 <223>

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Met Glu Gly Ile Asn Lys Thr Ala Lys Met Gln Phe Phe Phe Arg Pro	
1 5 10 15	
ttc tca cct gac cct gag gtc cag atg ctg att ttt gtg gtc ttc ctg	96
Phe Ser Pro Asp Pro Glu Val Gln Met Leu Ile Phe Val Val Phe Leu	
20 25 30	
atg atg tat ctg acc agc ctc ggt gga aat gct aca att gca gtc att	144
Met Met Tyr Leu Thr Ser Leu Gly Gly Asn Ala Thr Ile Ala Val Ile	
35 40 45	
gtt cag atc aat cat tcc ctc cac acc ccc atg tac ttt ttc ctg gct	192
Val Gln Ile Asn His Ser Leu His Thr Pro Met Tyr Phe Phe Leu Ala	
50 55 60	
aat ctg gca gtt cta gaa atc ttc tat aca tct tcc atc acc cca ttg	240

Asn	Leu	Ala	Val	Leu	Glu	Ile	Phe	Tyr	Thr	Ser	Ser	Ile	Thr	Pro	Leu		
65					70					75					80		
gcc	ttg	gca	aac	ctc	ctt	tca	atg	ggc	aaa	act	cct	gtt	tcc	atc	acg		288
Ala	Leu	Ala	Asn	Leu	Leu	Ser	Met	Gly	Lys	Thr	Pro	Val	Ser	Ile	Thr		
			85					90					95				
gga	tgt	ggc	acc	cag	atg	ttt	ttc	ttt	gtc	ttc	ttg	ggg	ggg	gct	gat		336
Gly	Cys	Gly	Thr	Gln	Met	Phe	Phe	Phe	Val	Phe	Leu	Gly	Gly	Ala	Asp		
			100					105					110				
tgt	gtc	ctg	ctg	gta	gtc	atg	gct	tat	gac	cgg	ttt	ata	gcg	atc	tgt		384
Cys	Val	Leu	Leu	Val	Val	Met	Ala	Tyr	Asp	Arg	Phe	Ile	Ala	Ile	Cys		
			115				120					125					
cac	cct	ctg	cga	tac	agg	ctc	atc	atg	agc	tgg	tcc	ttg	tgt	gtg	gag		432
His	Pro	Leu	Arg	Tyr	Arg	Leu	Ile	Met	Ser	Trp	Ser	Leu	Cys	Val	Glu		
	130					135					140						
ctg	ctg	gta	ggc	tcc	ttg	gtg	ctg	ggg	ttc	ctg	ttg	tca	ctg	cca	ctc		480
Leu	Leu	Val	Gly	Ser	Leu	Val	Leu	Gly	Phe	Leu	Leu	Ser	Leu	Pro	Leu		
145					150				155						160		
acc	att	tta	atc	ttc	cat	ctc	cca	ttc	tgc	cac	aat	gat	gag	atc	tac		528
Thr	Ile	Leu	Ile	Phe	His	Leu	Pro	Phe	Cys	His	Asn	Asp	Glu	Ile	Tyr		
				165					170					175			
cac	ttc	tac	tgt	gac	atg	cct	gca	gtc	atg	cgc	ctg	gct	tgt	gca	gac		576
His	Phe	Tyr	Cys	Asp	Met	Pro	Ala	Val	Met	Arg	Leu	Ala	Cys	Ala	Asp		
			180					185					190				
aca	cgc	gtt	cac	aag	act	gct	ctg	tat	atc	atc	agc	ttc	atc	gtc	ctt		624
Thr	Arg	Val	His	Lys	Thr	Ala	Leu	Tyr	Ile	Ile	Ser	Phe	Ile	Val	Leu		
			195				200					205					
agc	atc	ccc	ctc	tca	ttg	atc	tcc	atc	tcc	tat	gtc	ttc	atc	gtg	gta		672
Ser	Ile	Pro	Leu	Ser	Leu	Ile	Ser	Ile	Ser	Tyr	Val	Phe	Ile	Val	Val		
	210					215					220						
gcc	att	tta	cgg	atc	cgg	tca	gca	gaa	ggg	cgc	cag	caa	gcc	tac	tct		720
Ala	Ile	Leu	Arg	Ile	Arg	Ser	Ala	Glu	Gly	Arg	Gln	Gln	Ala	Tyr	Ser		
225					230				235						240		
acc	tgc	tct	tct	cac	atc	tta	gtg	gtc	ctc	ctg	cag	tat	ggc	tgc	acc		768
Thr	Cys	Ser	Ser	His	Ile	Leu	Val	Val	Leu	Leu	Gln	Tyr	Gly	Cys	Thr		
				245				250						255			
agc	ttt	ata	tac	ttg	tcc	ccc	agt	tcc	agc	tac	tct	cct	gag	atg	ggc		816
Ser	Phe	Ile	Tyr	Leu	Ser	Pro	Ser	Ser	Ser	Tyr	Ser	Pro	Glu	Met	Gly		
			260					265					270				
cgg	gtg	gta	tct	gtg	gcc	tac	aca	ttt	atc	act	ccc	att	tta	aac	ccc		864
Arg	Val	Val	Ser	Val	Ala	Tyr	Thr	Phe	Ile	Thr	Pro	Ile	Leu	Asn	Pro		
			275				280					285					
ttg	atc	tat	agt	ttg	agg	aac	aag	gaa	ctg	aaa	gat	gcc	cta	agg	aaa		912
Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Leu	Lys	Asp	Ala	Leu	Arg	Lys		
	290					295					300						
gca	ttg	aga	aaa	ttc	tag												930
Ala	Leu	Arg	Lys	Phe													

305

<210> 136
 <211> 309
 <212> PRT
 <213> Homo Sapiens

<400> 136

Met Glu Gly Ile Asn Lys Thr Ala Lys Met Gln Phe Phe Phe Arg Pro
 1 5 10 15

Phe Ser Pro Asp Pro Glu Val Gln Met Leu Ile Phe Val Val Phe Leu
 20 25 30

Met Met Tyr Leu Thr Ser Leu Gly Gly Asn Ala Thr Ile Ala Val Ile
 35 40 45

Val Gln Ile Asn His Ser Leu His Thr Pro Met Tyr Phe Phe Leu Ala
 50 55 60

Asn Leu Ala Val Leu Glu Ile Phe Tyr Thr Ser Ser Ile Thr Pro Leu
 65 70 75 80

Ala Leu Ala Asn Leu Leu Ser Met Gly Lys Thr Pro Val Ser Ile Thr
 85 90 95

Gly Cys Gly Thr Gln Met Phe Phe Phe Val Phe Leu Gly Gly Ala Asp
 100 105 110

Cys Val Leu Leu Val Val Met Ala Tyr Asp Arg Phe Ile Ala Ile Cys
 115 120 125

His Pro Leu Arg Tyr Arg Leu Ile Met Ser Trp Ser Leu Cys Val Glu
 130 135 140

Leu Leu Val Gly Ser Leu Val Leu Gly Phe Leu Leu Ser Leu Pro Leu
 145 150 155 160

Thr Ile Leu Ile Phe His Leu Pro Phe Cys His Asn Asp Glu Ile Tyr
 165 170 175

His Phe Tyr Cys Asp Met Pro Ala Val Met Arg Leu Ala Cys Ala Asp
 180 185 190

Thr Arg Val His Lys Thr Ala Leu Tyr Ile Ile Ser Phe Ile Val Leu
 195 200 205

Ser Ile Pro Leu Ser Leu Ile Ser Ile Ser Tyr Val Phe Ile Val Val
210 215 220

Ala Ile Leu Arg Ile Arg Ser Ala Glu Gly Arg Gln Gln Ala Tyr Ser
225 230 235 240

Thr Cys Ser Ser His Ile Leu Val Val Leu Leu Gln Tyr Gly Cys Thr
245 250 255

Ser Phe Ile Tyr Leu Ser Pro Ser Ser Ser Tyr Ser Pro Glu Met Gly
260 265 270

Arg Val Val Ser Val Ala Tyr Thr Phe Ile Thr Pro Ile Leu Asn Pro
275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Glu Leu Lys Asp Ala Leu Arg Lys
290 295 300

Ala Leu Arg Lys Phe
305

<210> 137
<211> 892
<212> DNA
<213> Homo Sapiens

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<222> (1)..(891)
<223>

<400> 137
atg gaa gga ata aat aaa act gca aag atg cag ttt ttc ttt cgt cca 48
Met Glu Gly Ile Asn Lys Thr Ala Lys Met Gln Phe Phe Phe Arg Pro
1 5 10 15
ttc tca cct gac cct gag gtc cag atg ctg att ttt gtg gtc ttc ctg 96
Phe Ser Pro Asp Pro Glu Val Gln Met Leu Ile Phe Val Val Phe Leu
20 25 30
atg atg tat ctg acc agc ctc ggt gga aat gct aca att gca gtc att 144
Met Met Tyr Leu Thr Ser Leu Gly Gly Asn Ala Thr Ile Ala Val Ile
35 40 45
gtt cag atc aat cat tcc ctc cac acc ccc atg tac ttt ttc ctg gct 192
Val Gln Ile Asn His Ser Leu His Thr Pro Met Tyr Phe Phe Leu Ala
50 55 60
aat ctg gca gtt cta gaa atc ttc tat aca tct tcc atc acc cca ttg 240
Asn Leu Ala Val Leu Glu Ile Phe Tyr Thr Ser Ser Ile Thr Pro Leu
65 70 75 80

gcc ttg gca aac ctc ctt tca atg ggc aaa act cct gtt tcc atc acg 288
 Ala Leu Ala Asn Leu Leu Ser Met Gly Lys Thr Pro Val Ser Ile Thr
 85 90 95
 gga tgt ggc acc cag atg ttt ttc ttt gtc ttc ttg ggt ggg gct gat 336
 Gly Cys Gly Thr Gln Met Phe Phe Phe Val Phe Leu Gly Gly Ala Asp
 100 105 110
 tgt gtc ctg ctg gta gtc atg gct tat gac cag ttt ata gcg atc tgt 384
 Cys Val Leu Leu Val Val Met Ala Tyr Asp Gln Phe Ile Ala Ile Cys
 115 120 125
 cac cct ctg cga tac agg ctc atc atg agc tgg tcc ttg tgt gtg gag 432
 His Pro Leu Arg Tyr Arg Leu Ile Met Ser Trp Ser Leu Cys Val Glu
 130 135 140
 ctg ctg gta ggc tcc ttg gtg ctg ggg ttc ctg ttg tca ctg cca ctc 480
 Leu Leu Val Gly Ser Leu Val Leu Gly Phe Leu Leu Ser Leu Pro Leu
 145 150 155 160
 acc att tta atc ttc cat ctc cca ttc tgc cac aat gat gag atc tac 528
 Thr Ile Leu Ile Phe His Leu Pro Phe Cys His Asn Asp Glu Ile Tyr
 165 170 175
 cac ttc tac tgt gac atg cct gca gtc atg cgc ctg gct tgt gca gac 576
 His Phe Tyr Cys Asp Met Pro Ala Val Met Arg Leu Ala Cys Ala Asp
 180 185 190
 aca cgc gtt cac aag act gct ctg tat atc atc agc ttc atc gtc ctt 624
 Thr Arg Val His Lys Thr Ala Leu Tyr Ile Ile Ser Phe Ile Val Leu
 195 200 205
 agc atc ccc ctc tca ttg atc tcc atc tcc tat gtc ttc atc gtg gta 672
 Ser Ile Pro Leu Ser Leu Ile Ser Ile Ser Tyr Val Phe Ile Val Val
 210 215 220
 gcc att tta cgg atc cgg tca gca gaa ggg cgc cag caa gcc tac tct 720
 Ala Ile Leu Arg Ile Arg Ser Ala Glu Gly Arg Gln Gln Ala Tyr Ser
 225 230 235 240
 acc tgc tct tct cac atc tta gtg gtc ctc ctg cag tat ggc tgc acc 768
 Thr Cys Ser Ser His Ile Leu Val Val Leu Leu Gln Tyr Gly Cys Thr
 245 250 255
 agc ttt ata tac ttg tcc ccc agt tcc agc tac tct cct gag atg ggc 816
 Ser Phe Ile Tyr Leu Ser Pro Ser Ser Tyr Ser Pro Glu Met Gly
 260 265 270
 cgg gtg gta tct gtg gcc tac aca ttt atc act ccc att tta aac ccc 864
 Arg Val Val Ser Val Ala Tyr Thr Phe Ile Thr Pro Ile Leu Asn Pro
 275 280 285
 ttg atc tat agt ttg agg aac aag gaa c 892
 Leu Ile Tyr Ser Leu Arg Asn Lys Glu
 290 295

<210> 138
 <211> 297
 <212> PRT
 <213> Homo Sapiens

<400> 138

Met Glu Gly Ile Asn Lys Thr Ala Lys Met Gln Phe Phe Phe Arg Pro
 1 5 10 15

Phe Ser Pro Asp Pro Glu Val Gln Met Leu Ile Phe Val Val Phe Leu
 20 25 30

Met Met Tyr Leu Thr Ser Leu Gly Gly Asn Ala Thr Ile Ala Val Ile
 35 40 45

Val Gln Ile Asn His Ser Leu His Thr Pro Met Tyr Phe Phe Leu Ala
 50 55 60

Asn Leu Ala Val Leu Glu Ile Phe Tyr Thr Ser Ser Ile Thr Pro Leu
 65 70 75 80

Ala Leu Ala Asn Leu Leu Ser Met Gly Lys Thr Pro Val Ser Ile Thr
 85 90 95

Gly Cys Gly Thr Gln Met Phe Phe Phe Val Phe Leu Gly Gly Ala Asp
 100 105 110

Cys Val Leu Leu Val Val Met Ala Tyr Asp Gln Phe Ile Ala Ile Cys
 115 120 125

His Pro Leu Arg Tyr Arg Leu Ile Met Ser Trp Ser Leu Cys Val Glu
 130 135 140

Leu Leu Val Gly Ser Leu Val Leu Gly Phe Leu Leu Ser Leu Pro Leu
 145 150 155 160

Thr Ile Leu Ile Phe His Leu Pro Phe Cys His Asn Asp Glu Ile Tyr
 165 170 175

His Phe Tyr Cys Asp Met Pro Ala Val Met Arg Leu Ala Cys Ala Asp
 180 185 190

Thr Arg Val His Lys Thr Ala Leu Tyr Ile Ile Ser Phe Ile Val Leu
 195 200 205

Ser Ile Pro Leu Ser Leu Ile Ser Ile Ser Tyr Val Phe Ile Val Val
 210 215 220

Ala Ile Leu Arg Ile Arg Ser Ala Glu Gly Arg Gln Gln Ala Tyr Ser
 225 230 235 240

Thr Cys Ser Ser His Ile Leu Val Val Leu Leu Gln Tyr Gly Cys Thr
 245 250 255

Ser Phe Ile Tyr Leu Ser Pro Ser Ser Ser Tyr Ser Pro Glu Met Gly
 260 265 270

Arg Val Val Ser Val Ala Tyr Thr Phe Ile Thr Pro Ile Leu Asn Pro
 275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Glu
 290 295

<210> 139
 <211> 951
 <212> DNA
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<220>
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<400> 139 48
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 Met Val Glu Glu Asn His Thr Met Lys Asn Glu Phe Ile Leu Thr Gly
 1 5 10 15
 ttt aca gat cac cct gag ctg aag act ctg ctg ttt gtg gtg ttc ttt 96
 Phe Thr Asp His Pro Glu Leu Lys Thr Leu Leu Phe Val Val Phe Phe
 20 25 30
 gcc atc tat ctg atc acc gtg gtg ggg aat att agt ttg gtg gca ctg 144
 Ala Ile Tyr Leu Ile Thr Val Val Gly Asn Ile Ser Leu Val Ala Leu
 35 40 45
 ata ttt aca cac tgt cgg ctt cac aca cca atg tac atc ttt ctg gga 192
 Ile Phe Thr His Cys Arg Leu His Thr Pro Met Tyr Ile Phe Leu Gly
 50 55 60
 aat ctg gct ctt gtg gat tct tgc tgt gcc tgt gct att acc ccc aaa 240
 Asn Leu Ala Leu Val Asp Ser Cys Cys Ala Cys Ala Ile Thr Pro Lys
 65 70 75 80
 atg tta gag aac ttc ttt tct gag ggc aaa agg att tcc ctc tat gaa 288
 Met Leu Glu Asn Phe Phe Ser Glu Gly Lys Arg Ile Ser Leu Tyr Glu
 85 90 95
 tgt gca gta cag ttt tat ttt ctt tgc act gtg gaa act gca gac tgc 336
 Cys Ala Val Gln Phe Tyr Phe Leu Cys Thr Val Glu Thr Ala Asp Cys
 100 105 110
 ttt ctt ctg gca gca gtg gcc tat gac cgc tat gtg gcc atc tgc aac 384
 Phe Leu Leu Ala Ala Val Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

cca ctg cag tac cac atc atg atg tcc aag aaa ctc tgc att cag atg Pro Leu Gln Tyr His Ile Met Met Ser Lys Lys Leu Cys Ile Gln Met 130 135 140	432
acc aca ggc gcc ttc ata gct gga aat ctg cat tcc atg att cat gta Thr Thr Gly Ala Phe Ile Ala Gly Asn Leu His Ser Met Ile His Val 145 150 155 160	480
ggg ctt gta ttt agg tta gtt ttc tgt gga ttg aat cac atc aac cac Gly Leu Val Phe Arg Leu Val Phe Cys Gly Leu Asn His Ile Asn His 165 170 175	528
ttt tac tgt gat act ctt ccc ttg tat aga ctc tcc tgt gtt gac cct Phe Tyr Cys Asp Thr Leu Pro Leu Tyr Arg Leu Ser Cys Val Asp Pro 180 185 190	576
ttc atc aat gaa ctg gtt cta ttc atc ttc tca ggt tca gtt caa gtc Phe Ile Asn Glu Leu Val Leu Phe Ile Phe Ser Gly Ser Val Gln Val 195 200 205	624
ttt acc ata ggt agt gtc tta ata tct tat ctc tat att ctt ctt act Phe Thr Ile Gly Ser Val Leu Ile Ser Tyr Leu Tyr Ile Leu Leu Thr 210 215 220	672
att ttc aga atg aaa tcc aag gag gga agg gcc aaa gcc ttt tct act Ile Phe Arg Met Lys Ser Lys Glu Gly Arg Ala Lys Ala Phe Ser Thr 225 230 235 240	720
tgt gca tcc cac ttt tca tca gtt tca tta ttc tat gga tct att ttt Cys Ala Ser His Phe Ser Ser Val Ser Leu Phe Tyr Gly Ser Ile Phe 245 250 255	768
ttc cta tac att aga cca aat ttg ctt gaa gaa gga ggt aat gat ata Phe Leu Tyr Ile Arg Pro Asn Leu Leu Glu Glu Gly Gly Asn Asp Ile 260 265 270	816
cca gct gct att tta ttt aca ata gta gtt ccc tta cta aat cct ttc Pro Ala Ala Ile Leu Phe Thr Ile Val Val Pro Leu Leu Asn Pro Phe 275 280 285	864
att tat agt ctg aga aac aag gaa gta ata agt gtc tta aga aaa att Ile Tyr Ser Leu Arg Asn Lys Glu Val Ile Ser Val Leu Arg Lys Ile 290 295 300	912
ctg ctg aaa ata aaa tct caa gga agt gtg aac aaa tga Leu Leu Lys Ile Lys Ser Gln Gly Ser Val Asn Lys 305 310 315	951
<210> 140	
<211> 316	
<212> PRT	
<213> Homo Sapiens	
<400> 140	
Met Val Glu Glu Asn His Thr Met Lys Asn Glu Phe Ile Leu Thr Gly 1 5 10 15	

Phe Thr Asp His Pro Glu Leu Lys Thr Leu Leu Phe Val Val Phe Phe
 20 25 30

Ala Ile Tyr Leu Ile Thr Val Val Gly Asn Ile Ser Leu Val Ala Leu
 35 40 45

Ile Phe Thr His Cys Arg Leu His Thr Pro Met Tyr Ile Phe Leu Gly
 50 55 60

Asn Leu Ala Leu Val Asp Ser Cys Cys Ala Cys Ala Ile Thr Pro Lys
 65 70 75 80

Met Leu Glu Asn Phe Phe Ser Glu Gly Lys Arg Ile Ser Leu Tyr Glu
 85 90 95

Cys Ala Val Gln Phe Tyr Phe Leu Cys Thr Val Glu Thr Ala Asp Cys
 100 105 110

Phe Leu Leu Ala Ala Val Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Gln Tyr His Ile Met Met Ser Lys Lys Leu Cys Ile Gln Met
 130 135 140

Thr Thr Gly Ala Phe Ile Ala Gly Asn Leu His Ser Met Ile His Val
 145 150 155 160

Gly Leu Val Phe Arg Leu Val Phe Cys Gly Leu Asn His Ile Asn His
 165 170 175

Phe Tyr Cys Asp Thr Leu Pro Leu Tyr Arg Leu Ser Cys Val Asp Pro
 180 185 190

Phe Ile Asn Glu Leu Val Leu Phe Ile Phe Ser Gly Ser Val Gln Val
 195 200 205

Phe Thr Ile Gly Ser Val Leu Ile Ser Tyr Leu Tyr Ile Leu Leu Thr
 210 215 220

Ile Phe Arg Met Lys Ser Lys Glu Gly Arg Ala Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Phe Ser Ser Val Ser Leu Phe Tyr Gly Ser Ile Phe
 245 250 255

Phe Leu Tyr Ile Arg Pro Asn Leu Leu Glu Glu Gly Gly Asn Asp Ile

260	265	270	
Pro Ala Ala Ile Leu Phe Thr Ile Val Val Pro Leu Leu Asn Pro Phe			
275	280	285	
Ile Tyr Ser Leu Arg Asn Lys Glu Val Ile Ser Val Leu Arg Lys Ile			
290	295	300	
Leu Leu Lys Ile Lys Ser Gln Gly Ser Val Asn Lys			
305	310	315	
<210> 141			
<211> 939			
<212> DNA			
<213> Homo Sapiens			
<220>			
<221> CDS			
<222> (1)..(936)			
<223>			
<400> 141			
atg gat cag aaa aat gga agt tct ttc act gga ttt atc cta ctg ggt			48
Met Asp Gln Lys Asn Gly Ser Ser Phe Thr Gly Phe Ile Leu Leu Gly			
1 5 10 15			
tct tct gac agg cct cag ctg gag cta gtc ctc ttt gtg gtt ctt ttg			96
Phe Ser Asp Arg Pro Gln Leu Glu Leu Val Leu Phe Val Val Leu Leu			
20 25 30			
atc ttc tat atc ttc act ttg ctg ggg aac aaa acc atc att gta tta			144
Ile Phe Tyr Ile Phe Thr Leu Leu Gly Asn Lys Thr Ile Ile Val Leu			
35 40 45			
tct cac ttg gac cca cat ctt cac act cct atg tat ttt ttc ttc tcc			192
Ser His Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Phe Ser			
50 55 60			
aac cta agc ttt ttg gat ctg tgt tac aca acc ggc att gtt cca cag			240
Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Gly Ile Val Pro Gln			
65 70 75 80			
ctc ctg gtt aat ctc agg gga gca gac aaa tca atc tcc tat ggt ggt			288
Leu Leu Val Asn Leu Arg Gly Ala Asp Lys Ser Ile Ser Tyr Gly Gly			
85 90 95			
tgt gta gtt cag ctg tac atc tct cta ggc ttg gga tct aca gaa tgc			336
Cys Val Val Gln Leu Tyr Ile Ser Leu Gly Leu Gly Ser Thr Glu Cys			
100 105 110			
gtt ctt ttt tta gtg atg gta ttt gac cgc tat gca gct gtt tgc agg			384
Val Leu Phe Leu Val Met Val Phe Asp Arg Tyr Ala Ala Val Cys Arg			
115 120 125			
ccc ctc cac tac aca gta gtc atg cac cct tgt ctg tat gtg ctg atg			432
Pro Leu His Tyr Thr Val Val Met His Pro Cys Leu Tyr Val Leu Met			

130 135 140
 gct tct act tca tgg gtc att ggt ttt gcc aac tcc cta ttg cag acg 480
 Ala Ser Thr Ser Trp Val Ile Gly Phe Ala Asn Ser Leu Leu Gln Thr
 145 150 155 160
 gtg ctc atc ttg ctt tta aca ctt tgt gga aga aat aaa tta gaa cac 528
 Val Leu Ile Leu Leu Leu Thr Leu Cys Gly Arg Asn Lys Leu Glu His
 165 170 175
 ttt ctt tgt gag gtt cct cca ttg ctc aag ctt gcc tgt gtt gac act 576
 Phe Leu Cys Glu Val Pro Pro Leu Leu Lys Leu Ala Cys Val Asp Thr
 180 185 190
 act atg aat gaa tct gaa ctc ttc ttt gtc agt gtc att att ctt ctt 624
 Thr Met Asn Glu Ser Glu Leu Phe Phe Val Ser Val Ile Ile Leu Leu
 195 200 205
 gta cct gtt gca tta atc ata ttc tcc tat agt cag att gtc agg gca 672
 Val Pro Val Ala Leu Ile Ile Phe Ser Tyr Ser Gln Ile Val Arg Ala
 210 215 220
 gtc atg agg ata aag tta gca aca ggg cag aga aaa gtg ttt ggg aca 720
 Val Met Arg Ile Lys Leu Ala Thr Gly Gln Arg Lys Val Phe Gly Thr
 225 230 235 240
 tgt ggc tcc cac ctc aca gtg gtt tcc ctg ttc tac ggc aca gct atc 768
 Cys Gly Ser His Leu Thr Val Val Ser Leu Phe Tyr Gly Thr Ala Ile
 245 250 255
 tat gct tac ctc cag ccc ggc aac aac tac tct cag gat cag ggc aag 816
 Tyr Ala Tyr Leu Gln Pro Gly Asn Asn Tyr Ser Gln Asp Gln Gly Lys
 260 265 270
 ttc atc tct ctc ttc tac acc atc att aca ccc atg atc aac ccc ctc 864
 Phe Ile Ser Leu Phe Tyr Thr Ile Ile Thr Pro Met Ile Asn Pro Leu
 275 280 285
 ata tat aca ctg agg aac aag gat gtg aaa gga gca ctt aag aag gtg 912
 Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Lys Lys Val
 290 295 300
 ctc tgg aag aac tac gac tcc aga tga 939
 Leu Trp Lys Asn Tyr Asp Ser Arg
 305 310

<210> 142
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 142

Met Asp Gln Lys Asn Gly Ser Ser Phe Thr Gly Phe Ile Leu Leu Gly
 1 5 10 15

Phe Ser Asp Arg Pro Gln Leu Glu Leu Val Leu Phe Val Val Leu Leu
 20 25 30

Ile Phe Tyr Ile Phe Thr Leu Leu Gly Asn Lys Thr Ile Ile Val Leu
35 40 45

Ser His Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Phe Ser
50 55 60

Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Gly Ile Val Pro Gln
65 70 75 80

Leu Leu Val Asn Leu Arg Gly Ala Asp Lys Ser Ile Ser Tyr Gly Gly
85 90 95

Cys Val Val Gln Leu Tyr Ile Ser Leu Gly Leu Gly Ser Thr Glu Cys
100 105 110

Val Leu Phe Leu Val Met Val Phe Asp Arg Tyr Ala Ala Val Cys Arg
115 120 125

Pro Leu His Tyr Thr Val Val Met His Pro Cys Leu Tyr Val Leu Met
130 135 140

Ala Ser Thr Ser Trp Val Ile Gly Phe Ala Asn Ser Leu Leu Gln Thr
145 150 155 160

Val Leu Ile Leu Leu Leu Thr Leu Cys Gly Arg Asn Lys Leu Glu His
165 170 175

Phe Leu Cys Glu Val Pro Pro Leu Leu Lys Leu Ala Cys Val Asp Thr
180 185 190

Thr Met Asn Glu Ser Glu Leu Phe Phe Val Ser Val Ile Ile Leu Leu
195 200 205

Val Pro Val Ala Leu Ile Ile Phe Ser Tyr Ser Gln Ile Val Arg Ala
210 215 220

Val Met Arg Ile Lys Leu Ala Thr Gly Gln Arg Lys Val Phe Gly Thr
225 230 235 240

Cys Gly Ser His Leu Thr Val Val Ser Leu Phe Tyr Gly Thr Ala Ile
245 250 255

Tyr Ala Tyr Leu Gln Pro Gly Asn Asn Tyr Ser Gln Asp Gln Gly Lys
260 265 270

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Phe Ile Ser Leu Phe Tyr Thr Ile Ile Thr Pro Met Ile Asn Pro Leu
 275 280 285

Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Lys Lys Val
 290 295 300

Leu Trp Lys Asn Tyr Asp Ser Arg
 305 310

<210> 143
 <211> 924
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(921)
 <223>

<400> 143 48
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 Met Asn His Ser Val Val Thr Glu Phe Ile Ile Leu Gly Leu Thr Lys
 1 5 10 15
 aag cct gaa ctc cag gga att atc ttc ctc ttt ttt ctc att gtc tat 96
 Lys Pro Glu Leu Gln Gly Ile Ile Phe Leu Phe Phe Leu Ile Val Tyr
 20 25 30
 ctt gtg gct ttt ctc ggc aac atg ctc atc atc att gcc aaa atc tat 144
 Leu Val Ala Phe Leu Gly Asn Met Leu Ile Ile Ile Ala Lys Ile Tyr
 35 40 45
 aac aac acc ttg cat acg ccc atg tat gtt ttc ctt ctg aca ctg gct 192
 Asn Asn Thr Leu His Thr Pro Met Tyr Val Phe Leu Leu Thr Leu Ala
 50 55 60
 gtt gtg gac atc atc tgc aca aca agc atc ata ccg aag atg ctg ggg 240
 Val Val Asp Ile Ile Cys Thr Thr Ser Ile Ile Pro Lys Met Leu Gly
 65 70 75 80
 acc atg cta aca tca gaa aat acc att tca tat gca ggc tgc atg tcc 288
 Thr Met Leu Thr Ser Glu Asn Thr Ile Ser Tyr Ala Gly Cys Met Ser
 85 90 95
 cag ctc ttc ttg ttc aca tgg tct ctg gga gct gag atg gtt ctc ttc 336
 Gln Leu Phe Leu Phe Thr Trp Ser Leu Gly Ala Glu Met Val Leu Phe
 100 105 110
 acc acc atg gcc tat gac cgc tat gtg gcc att tgt ttc cct ctt cat 384
 Thr Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe Pro Leu His
 115 120 125
 tac agt act gtt atg aac cac cat atg tgt gta gcc ttg ctc agc atg 432
 Tyr Ser Thr Val Met Asn His His Met Cys Val Ala Leu Leu Ser Met
 130 135 140
 gtc atg gct att gca gtc acc aat tcc tgg gtg cac aca gct ctt atc 480

Val Met Ala Ile Ala Val Thr Asn Ser Trp Val His Thr Ala Leu Ile	
145 150 155 160	
atg agg ttg act ttc tgt ggg cca aac acc att gac cac ttc ttc tgt	528
Met Arg Leu Thr Phe Cys Gly Pro Asn Thr Ile Asp His Phe Phe Cys	
165 170 175	
gag ata ccc cca ttg ctg gct ttg tcc tgt agc cct gta aga atc aat	576
Glu Ile Pro Leu Leu Ala Leu Ser Cys Ser Pro Val Arg Ile Asn	
180 185 190	
gag gtg atg gtg tat gtt gct gat att acc ctg gcc ata ggg gac ttt	624
Glu Val Met Val Tyr Val Ala Asp Ile Thr Leu Ala Ile Gly Asp Phe	
195 200 205	
att ctt acc tgc atc tcc tat ggt ttt atc att gtt gct att ctc cgt	672
Ile Leu Thr Cys Ile Ser Tyr Gly Phe Ile Ile Val Ala Ile Leu Arg	
210 215 220	
atc cgc aca gta gaa ggc aag agg aag gcc ttc tca aca tgc tca tct	720
Ile Arg Thr Val Glu Gly Lys Arg Lys Ala Phe Ser Thr Cys Ser Ser	
225 230 235 240	
cat ctc aca gtg gtg acc ctt tac tat tct cct gta atc tac acc tat	768
His Leu Thr Val Val Thr Leu Tyr Tyr Ser Pro Val Ile Tyr Thr Tyr	
245 250 255	
atc cgc cct gct tcc agc tat aca ttt gaa aga gac aag gtg gta gct	816
Ile Arg Pro Ala Ser Ser Tyr Thr Phe Glu Arg Asp Lys Val Val Ala	
260 265 270	
gca ctc tat act ctt gtg act ccc aca tta aac ccg atg gtg tac agc	864
Ala Leu Tyr Thr Leu Val Thr Pro Thr Leu Asn Pro Met Val Tyr Ser	
275 280 285	
ttc cag aat agg gag atg cag gca gga att agg aag gtg ttt gca ttt	912
Phe Gln Asn Arg Glu Met Gln Ala Gly Ile Arg Lys Val Phe Ala Phe	
290 295 300	
ctg aaa cac tag	924
Leu Lys His	
305	

<210> 144
 <211> 307
 <212> PRT
 <213> Homo Sapiens

<400> 144

Met Asn His Ser Val Val Thr Glu Phe Ile Ile Leu Gly Leu Thr Lys
1 5 10 15
Lys Pro Glu Leu Gln Gly Ile Ile Phe Leu Phe Phe Leu Ile Val Tyr
20 25 30
Leu Val Ala Phe Leu Gly Asn Met Leu Ile Ile Ile Ala Lys Ile Tyr
35 40 45

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Asn Asn Thr Leu His Thr Pro Met Tyr Val Phe Leu Leu Thr Leu Ala
50 55 60

Val Val Asp Ile Ile Cys Thr Thr Ser Ile Ile Pro Lys Met Leu Gly
65 70 75 80

Thr Met Leu Thr Ser Glu Asn Thr Ile Ser Tyr Ala Gly Cys Met Ser
85 90 95

Gln Leu Phe Leu Phe Thr Trp Ser Leu Gly Ala Glu Met Val Leu Phe
100 105 110

Thr Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe Pro Leu His
115 120 125

Tyr Ser Thr Val Met Asn His His Met Cys Val Ala Leu Leu Ser Met
130 135 140

Val Met Ala Ile Ala Val Thr Asn Ser Trp Val His Thr Ala Leu Ile
145 150 155 160

Met Arg Leu Thr Phe Cys Gly Pro Asn Thr Ile Asp His Phe Phe Cys
165 170 175

Glu Ile Pro Pro Leu Leu Ala Leu Ser Cys Ser Pro Val Arg Ile Asn
180 185 190

Glu Val Met Val Tyr Val Ala Asp Ile Thr Leu Ala Ile Gly Asp Phe
195 200 205

Ile Leu Thr Cys Ile Ser Tyr Gly Phe Ile Ile Val Ala Ile Leu Arg
210 215 220

Ile Arg Thr Val Glu Gly Lys Arg Lys Ala Phe Ser Thr Cys Ser Ser
225 230 235 240

His Leu Thr Val Val Thr Leu Tyr Tyr Ser Pro Val Ile Tyr Thr Tyr
245 250 255

Ile Arg Pro Ala Ser Ser Tyr Thr Phe Glu Arg Asp Lys Val Val Ala
260 265 270

Ala Leu Tyr Thr Leu Val Thr Pro Thr Leu Asn Pro Met Val Tyr Ser
275 280 285

Phe Gln Asn Arg Glu Met Gln Ala Gly Ile Arg Lys Val Phe Ala Phe
 290 295 300

Leu Lys His
 305

<210> 145
 <211> 948
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(945)
 <223>

<400> 145
 atg acc aat cag aca cag atg atg gaa ttc ttg ctt gtg aga ttt act 48
 Met Thr Asn Gln Thr Gln Met Met Glu Phe Leu Leu Val Arg Phe Thr
 1 5 10 15
 gag aat tgg gtg ctc ctg agg ctg cat gct ttg ctc ttc tca ctg atc 96
 Glu Asn Trp Val Leu Leu Arg Leu His Ala Leu Leu Phe Ser Leu Ile
 20 25 30
 tac ctc acg gct gtg ctg atg aat tta gtc atc att ctc ctc atg att 144
 Tyr Leu Thr Ala Val Leu Met Asn Leu Val Ile Ile Leu Leu Met Ile
 35 40 45
 ctg gac cat cgt ctc cac atg gca atg tac ttt ttc ctc cga cat ttg 192
 Leu Asp His Arg Leu His Met Ala Met Tyr Phe Phe Leu Arg His Leu
 50 55 60
 tcc ttc tta gac ctg tgt ctc att tct gcc aca gtc ccc aaa tcc atc 240
 Ser Phe Leu Asp Leu Cys Leu Ile Ser Ala Thr Val Pro Lys Ser Ile
 65 70 75 80
 ctc aac tct gtc gcc tcc act gac tcc atc tcc ttc ctg ggg tgt gtg 288
 Leu Asn Ser Val Ala Ser Thr Asp Ser Ile Ser Phe Leu Gly Cys Val
 85 90 95
 ttg cag ctc ttc ttg gtg gta ctg ctg gct gga tca gag att ggc atc 336
 Leu Gln Leu Phe Leu Val Val Leu Leu Ala Gly Ser Glu Ile Gly Ile
 100 105 110
 ctt act gcc atg tcc tat gac cgc tat gct gcc atc tgc tgc ccc cta 384
 Leu Thr Ala Met Ser Tyr Asp Arg Tyr Ala Ala Ile Cys Cys Pro Leu
 115 120 125
 cac tgt gag gct gtc atg agc aga ggg ctc tgt gtc cag ttg atg gct 432
 His Cys Glu Ala Val Met Ser Arg Gly Leu Cys Val Gln Leu Met Ala
 130 135 140
 ctg tcc tgg ctc aac aga ggg gcc ttg gga ctc ttg tac aca gct gga 480
 Leu Ser Trp Leu Asn Arg Gly Ala Leu Gly Leu Leu Tyr Thr Ala Gly
 145 150 155 160

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aca ttc tct ctg aat ttt tat ggc tct gat gag cta cat cag ttc ttc 528
 Thr Phe Ser Leu Asn Phe Tyr Gly Ser Asp Glu Leu His Gln Phe Phe
 165 170 175
 tgc gat gtc cct gcc cta cta aag ctc act tgt tct aaa gaa cat gcc 576
 Cys Asp Val Pro Ala Leu Leu Lys Leu Thr Cys Ser Lys Glu His Ala
 180 185 190
 atc att agt gtc agt gtg gcc att ggg gtc tgt tat gca ttt tca tgt 624
 Ile Ile Ser Val Ser Val Ala Ile Gly Val Cys Tyr Ala Phe Ser Cys
 195 200 205
 tta gtt tgc att gta gtt tcc tat gtg tac att ttc tct gct gtg tta 672
 Leu Val Cys Ile Val Val Ser Tyr Val Tyr Ile Phe Ser Ala Val Leu
 210 215 220
 agg ata tca cag aga cag aga caa tcc aaa gcc ttt tcc aac tgt gtg 720
 Arg Ile Ser Gln Arg Gln Arg Gln Ser Lys Ala Phe Ser Asn Cys Val
 225 230 235 240
 cct cac ctc att gtt gtc act gtg ttt ctt gta aca ggt gct gtt gct 768
 Pro His Leu Ile Val Val Thr Val Phe Leu Val Thr Gly Ala Val Ala
 245 250 255
 tat tta aag cca ggg tct gat gca cct tct att cta gac ttg ctg gtg 816
 Tyr Leu Lys Pro Gly Ser Asp Ala Pro Ser Ile Leu Asp Leu Leu Val
 260 265 270
 tct gtg ttc tat tct gtc gca cct cca acc ttg aac cct gtt atc tac 864
 Ser Val Phe Tyr Ser Val Ala Pro Pro Thr Leu Asn Pro Val Ile Tyr
 275 280 285
 tgt ctg aag aac aag gac att aaa tcc gct ctg agt aaa gtc ctg tgg 912
 Cys Leu Lys Asn Lys Asp Ile Lys Ser Ala Leu Ser Lys Val Leu Trp
 290 295 300
 aat gtt aga agc agt ggg gta atg aaa gat gac taa 948
 Asn Val Arg Ser Ser Gly Val Met Lys Asp Asp
 305 310 315

<210> 146
 <211> 315
 <212> PRT
 <213> Homo Sapiens

<400> 146

Met Thr Asn Gln Thr Gln Met Met Glu Phe Leu Leu Val Arg Phe Thr
 1 5 10 15

Glu Asn Trp Val Leu Leu Arg Leu His Ala Leu Leu Phe Ser Leu Ile
 20 25 30

Tyr Leu Thr Ala Val Leu Met Asn Leu Val Ile Ile Leu Leu Met Ile
 35 40 45

Leu Asp His Arg Leu His Met Ala Met Tyr Phe Phe Leu Arg His Leu

50	55	60
Ser Phe Leu Asp Leu Cys Leu Ile Ser Ala Thr Val Pro Lys Ser Ile		
65	70	75 80
Leu Asn Ser Val Ala Ser Thr Asp Ser Ile Ser Phe Leu Gly Cys Val		
	85	90 95
Leu Gln Leu Phe Leu Val Val Leu Leu Ala Gly Ser Glu Ile Gly Ile		
	100	105 110
Leu Thr Ala Met Ser Tyr Asp Arg Tyr Ala Ala Ile Cys Cys Pro Leu		
	115	120 125
His Cys Glu Ala Val Met Ser Arg Gly Leu Cys Val Gln Leu Met Ala		
	130	135 140
Leu Ser Trp Leu Asn Arg Gly Ala Leu Gly Leu Leu Tyr Thr Ala Gly		
145	150	155 160
Thr Phe Ser Leu Asn Phe Tyr Gly Ser Asp Glu Leu His Gln Phe Phe		
	165	170 175
Cys Asp Val Pro Ala Leu Leu Lys Leu Thr Cys Ser Lys Glu His Ala		
	180	185 190
Ile Ile Ser Val Ser Val Ala Ile Gly Val Cys Tyr Ala Phe Ser Cys		
	195	200 205
Leu Val Cys Ile Val Val Ser Tyr Val Tyr Ile Phe Ser Ala Val Leu		
	210	215 220
Arg Ile Ser Gln Arg Gln Arg Gln Ser Lys Ala Phe Ser Asn Cys Val		
225	230	235 240
Pro His Leu Ile Val Val Thr Val Phe Leu Val Thr Gly Ala Val Ala		
	245	250 255
Tyr Leu Lys Pro Gly Ser Asp Ala Pro Ser Ile Leu Asp Leu Leu Val		
	260	265 270
Ser Val Phe Tyr Ser Val Ala Pro Pro Thr Leu Asn Pro Val Ile Tyr		
	275	280 285
Cys Leu Lys Asn Lys Asp Ile Lys Ser Ala Leu Ser Lys Val Leu Trp		
	290	295 300

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Asn Val Arg Ser Ser Gly Val Met Lys Asp Asp
 305 310 315

<210> 147
 <211> 939
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(936)
 <223>

<400> 147 48
 atg cat caa gga aac caa acc acc atc act gaa ttc att ctc ctg gga
 Met His Gln Gly Asn Gln Thr Thr Ile Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15
 ttt ttc aag cag gat gag cat caa aac ctc ctc ttt gtg ctt ttc ttg 96
 Phe Phe Lys Gln Asp Glu His Gln Asn Leu Leu Phe Val Leu Phe Leu
 20 25 30
 ggt atg tac ctg gtc act gtg att ggg aac ggg ctc atc att gtg gct 144
 Gly Met Tyr Leu Val Thr Val Ile Gly Asn Gly Leu Ile Ile Val Ala
 35 40 45
 atc agc ttg gat acg tac ctt cat acc ccc atg tat ctc ttc ctt gcc 192
 Ile Ser Leu Asp Thr Tyr Leu His Thr Pro Met Tyr Leu Phe Leu Ala
 50 55 60
 aat cta tcc ttt gct gat att tcc tcc att tcc aac tca gtc ccc aaa 240
 Asn Leu Ser Phe Ala Asp Ile Ser Ser Ile Ser Asn Ser Val Pro Lys
 65 70 75 80
 atg ctg gtg aat att caa acc aag agt caa tcc atc tct tat gag agc 288
 Met Leu Val Asn Ile Gln Thr Lys Ser Gln Ser Ile Ser Tyr Glu Ser
 85 90 95
 tgc atc aca cag atg tac ttt tct att gtg ttt gtc gtc att gac aat 336
 Cys Ile Thr Gln Met Tyr Phe Ser Ile Val Phe Val Val Ile Asp Asn
 100 105 110
 ttg ctc ttg ggg acc atg gcc tat gac cac ttt gtg gcg atc tgc cac 384
 Leu Leu Leu Gly Thr Met Ala Tyr Asp His Phe Val Ala Ile Cys His
 115 120 125
 cct ctg aat tat aca att ctc atg cgg ccc agg ttc ggc att ttg ctc 432
 Pro Leu Asn Tyr Thr Ile Leu Met Arg Pro Arg Phe Gly Ile Leu Leu
 130 135 140
 aca gtc atc tca tgg ttc ctc agt aat att att gct ctg aca cac acc 480
 Thr Val Ile Ser Trp Phe Leu Ser Asn Ile Ile Ala Leu Thr His Thr
 145 150 155 160
 ctt ctg ctc att caa ttg ctc ttc tgt aac cac aac act ctc cca cac 528
 Leu Leu Leu Ile Gln Leu Leu Phe Cys Asn His Asn Thr Leu Pro His
 165 170 175

ttc ttc tgt gac ttg gcc cct ctg ctc aaa ctg tcc tgt tca gat aca 576
 Phe Phe Cys Asp Leu Ala Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
 180 185 190

ttg atc aat gag ctt gtg ttg ttt att gtg ggt tta tca gtt atc atc 624
 Leu Ile Asn Glu Leu Val Leu Phe Ile Val Gly Leu Ser Val Ile Ile
 195 200 205

ttc ccc ttt aca ctc agc ttc ttt tcc tat gtc tgc atc atc aga gct 672
 Phe Pro Phe Thr Leu Ser Phe Phe Ser Tyr Val Cys Ile Ile Arg Ala
 210 215 220

gtc ctg aga gta tct tcc aca cag gga aag tgg aaa gcc ttc tcc act 720
 Val Leu Arg Val Ser Ser Thr Gln Gly Lys Trp Lys Ala Phe Ser Thr
 225 230 235 240

tgt ggc tct cac ctg aca gtt gta tta ctg ttc tac gga acc att gta 768
 Cys Gly Ser His Leu Thr Val Val Leu Leu Phe Tyr Gly Thr Ile Val
 245 250 255

ggc gtg tac ttt ttc ccc tcc tcc act cac cct gag gac act gat aag 816
 Gly Val Tyr Phe Phe Pro Ser Ser Thr His Pro Glu Asp Thr Asp Lys
 260 265 270

att ggt gct gtc cta ttc act gtg gtg aca ccc atg ata aac ccc ttc 864
 Ile Gly Ala Val Leu Phe Thr Val Val Thr Pro Met Ile Asn Pro Phe
 275 280 285

atc tac agc ttg agg aat aag gat atg aaa ggt gcc ctg aga aag ctc 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Gly Ala Leu Arg Lys Leu
 290 295 300

atc aat aga aaa att tct tcc ctt tga 939
 Ile Asn Arg Lys Ile Ser Ser Leu
 305 310

<210> 148

<211> 312

<212> PRT

<213> Homo Sapiens

<400> 148

Met His Gln Gly Asn Gln Thr Thr Ile Thr Glu Phe Ile Leu Leu Gly
1 5 10 15

Phe Phe Lys Gln Asp Glu His Gln Asn Leu Leu Phe Val Leu Phe Leu
20 25 30

Gly Met Tyr Leu Val Thr Val Ile Gly Asn Gly Leu Ile Ile Val Ala
35 40 45

Ile Ser Leu Asp Thr Tyr Leu His Thr Pro Met Tyr Leu Phe Leu Ala
50 55 60

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Asn Leu Ser Phe Ala Asp Ile Ser Ser Ile Ser Asn Ser Val Pro Lys
65 70 75 80

Met Leu Val Asn Ile Gln Thr Lys Ser Gln Ser Ile Ser Tyr Glu Ser
85 90 95

Cys Ile Thr Gln Met Tyr Phe Ser Ile Val Phe Val Val Ile Asp Asn
100 105 110

Leu Leu Leu Gly Thr Met Ala Tyr Asp His Phe Val Ala Ile Cys His
115 120 125

Pro Leu Asn Tyr Thr Ile Leu Met Arg Pro Arg Phe Gly Ile Leu Leu
130 135 140

Thr Val Ile Ser Trp Phe Leu Ser Asn Ile Ile Ala Leu Thr His Thr
145 150 155 160

Leu Leu Leu Ile Gln Leu Leu Phe Cys Asn His Asn Thr Leu Pro His
165 170 175

Phe Phe Cys Asp Leu Ala Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
180 185 190

Leu Ile Asn Glu Leu Val Leu Phe Ile Val Gly Leu Ser Val Ile Ile
195 200 205

Phe Pro Phe Thr Leu Ser Phe Phe Ser Tyr Val Cys Ile Ile Arg Ala
210 215 220

Val Leu Arg Val Ser Ser Thr Gln Gly Lys Trp Lys Ala Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Thr Val Val Leu Leu Phe Tyr Gly Thr Ile Val
245 250 255

Gly Val Tyr Phe Phe Pro Ser Ser Thr His Pro Glu Asp Thr Asp Lys
260 265 270

Ile Gly Ala Val Leu Phe Thr Val Val Thr Pro Met Ile Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Gly Ala Leu Arg Lys Leu
290 295 300

Ile Asn Arg Lys Ile Ser Ser Leu

305

310

<210> 149
 <211> 921
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(918)
 <223>

<400> 149
 atg gtg act gag ttt ctt ctt ctc ggc ttc tcc cac ctg gcc gac ctc 48
 Met Val Thr Glu Phe Leu Leu Leu Gly Phe Ser His Leu Ala Asp Leu
 1 5 10 15
 cag ggc ttg ctc ttc tct gtc ttt ctc act atc tac ctg ctg acc gtg 96
 Gln Gly Leu Leu Phe Ser Val Phe Leu Thr Ile Tyr Leu Leu Thr Val
 20 25 30
 gca ggc aat ttc ctc att gtg gtg ctg gtc tcc act gat gct gcc ctc 144
 Ala Gly Asn Phe Leu Ile Val Val Leu Val Ser Thr Asp Ala Ala Leu
 35 40 45
 cag tcc cct atg tac ttc ttc ctg cgc acc ctc tcg gcc ttg gag att 192
 Gln Ser Pro Met Tyr Phe Phe Leu Arg Thr Leu Ser Ala Leu Glu Ile
 50 55 60
 ggc tat acg tct gtc acg gtc ccc ctg cta ctt cac cac ctc ctt act 240
 Gly Tyr Thr Ser Val Thr Val Pro Leu Leu Leu His His Leu Leu Thr
 65 70 75 80
 ggc cgg cgc cac atc tct cgc tct gga tgt gct ctc cag atg ttc ttc 288
 Gly Arg Arg His Ile Ser Arg Ser Gly Cys Ala Leu Gln Met Phe Phe
 85 90 95
 ttc ctc ttc ttt ggc gcc acg gag tgc tgc ctc ctg gca gcc atg gcc 336
 Phe Leu Phe Phe Gly Ala Thr Glu Cys Cys Leu Leu Ala Ala Met Ala
 100 105 110
 tat gac cgc tat gca gcc atc tgt gaa ccc ctc cgc tac cca ctg ctg 384
 Tyr Asp Arg Tyr Ala Ala Ile Cys Glu Pro Leu Arg Tyr Pro Leu Leu
 115 120 125
 ctg agc cac cgg gtg tgt cta cag cta gct ggg tcg gcg tgg gcc tgt 432
 Leu Ser His Arg Val Cys Leu Gln Leu Ala Gly Ser Ala Trp Ala Cys
 130 135 140
 ggg gtg ctg gtg ggg ctg ggc cac acc cct ttc atc ttc tct ttg ccc 480
 Gly Val Leu Val Gly Leu Gly His Thr Pro Phe Ile Phe Ser Leu Pro
 145 150 155 160
 ttc tgc ggc ccc aat acc atc ccg cag ttc ttc tgt gag atc cag cct 528
 Phe Cys Gly Pro Asn Thr Ile Pro Gln Phe Phe Cys Glu Ile Gln Pro
 165 170 175
 gtc ctg cag ctg gta tgt gga gac acc tcg ctt aat gaa ctg cag att 576
 Val Leu Gln Leu Val Cys Gly Asp Thr Ser Leu Asn Glu Leu Gln Ile

180 185 190
 atc ctg gca aca gcc ctc ctc atc ctc tgc ccc ttt ggc ctc atc ctg 624
 Ile Leu Ala Thr Ala Leu Leu Ile Leu Cys Pro Phe Gly Leu Ile Leu
 195 200 205
 ggc tcc tac ggg cgt atc ctc gtt acc atc ttc cgg atc cca tct gtt 672
 Gly Ser Tyr Gly Arg Ile Leu Val Thr Ile Phe Arg Ile Pro Ser Val
 210 215 220
 gcg ggc cgc cgc aag gcc ttc tcc acc tgc tcc tcc cac ctg atc gtg 720
 Ala Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser Ser His Leu Ile Val
 225 230 235 240
 gtc tcc ctc ttc tat ggc acc gca ctc ttt atc tat att cgc cct aag 768
 Val Ser Leu Phe Tyr Gly Thr Ala Leu Phe Ile Tyr Ile Arg Pro Lys
 245 250 255
 gcc agc tac gat ccg gcc act gac cct ctg gtg tcc ctc ttc tat gct 816
 Ala Ser Tyr Asp Pro Ala Thr Asp Pro Leu Val Ser Leu Phe Tyr Ala
 260 265 270
 gtg gtc acc ccc atc ctc aac ccc atc atc tac agc ctg cgg aac aca 864
 Val Val Thr Pro Ile Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Thr
 275 280 285
 gag gtc aaa gct gcc cta aag aga acc atc cag aaa acg gtg cct atg 912
 Glu Val Lys Ala Ala Leu Lys Arg Thr Ile Gln Lys Thr Val Pro Met
 290 295 300
 gag att tga 921
 Glu Ile
 305

<210> 150
 <211> 306
 <212> PRT
 <213> Homo Sapiens

<400> 150

Met Val Thr Glu Phe Leu Leu Leu Gly Phe Ser His Leu Ala Asp Leu
 1 5 10 15

Gln Gly Leu Leu Phe Ser Val Phe Leu Thr Ile Tyr Leu Leu Thr Val
 20 25 30

Ala Gly Asn Phe Leu Ile Val Val Leu Val Ser Thr Asp Ala Ala Leu
 35 40 45

Gln Ser Pro Met Tyr Phe Phe Leu Arg Thr Leu Ser Ala Leu Glu Ile
 50 55 60

Gly Tyr Thr Ser Val Thr Val Pro Leu Leu Leu His His Leu Leu Thr
 65 70 75 80

Gly Arg Arg His Ile Ser Arg Ser Gly Cys Ala Leu Gln Met Phe Phe
85 90 95

Phe Leu Phe Phe Gly Ala Thr Glu Cys Cys Leu Leu Ala Ala Met Ala
100 105 110

Tyr Asp Arg Tyr Ala Ala Ile Cys Glu Pro Leu Arg Tyr Pro Leu Leu
115 120 125

Leu Ser His Arg Val Cys Leu Gln Leu Ala Gly Ser Ala Trp Ala Cys
130 135 140

Gly Val Leu Val Gly Leu Gly His Thr Pro Phe Ile Phe Ser Leu Pro
145 150 155 160

Phe Cys Gly Pro Asn Thr Ile Pro Gln Phe Phe Cys Glu Ile Gln Pro
165 170 175

Val Leu Gln Leu Val Cys Gly Asp Thr Ser Leu Asn Glu Leu Gln Ile
180 185 190

Ile Leu Ala Thr Ala Leu Leu Ile Leu Cys Pro Phe Gly Leu Ile Leu
195 200 205

Gly Ser Tyr Gly Arg Ile Leu Val Thr Ile Phe Arg Ile Pro Ser Val
210 215 220

Ala Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser Ser His Leu Ile Val
225 230 235 240

Val Ser Leu Phe Tyr Gly Thr Ala Leu Phe Ile Tyr Ile Arg Pro Lys
245 250 255

Ala Ser Tyr Asp Pro Ala Thr Asp Pro Leu Val Ser Leu Phe Tyr Ala
260 265 270

Val Val Thr Pro Ile Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Thr
275 280 285

Glu Val Lys Ala Ala Leu Lys Arg Thr Ile Gln Lys Thr Val Pro Met
290 295 300

Glu Ile
305

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<210> 151
 <211> 957
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(954)
 <223>

<400> 151
 atg gaa tgg gaa aac caa acc att ctg gtg gaa ttt ttt ctg aag gga 48
 Met Glu Trp Glu Asn Gln Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
 1 5 10 15
 cat tct gtt cac cca agg ctt gag tta ctc ttt ttt gtg cta atc ttc 96
 His Ser Val His Pro Arg Leu Glu Leu Phe Phe Val Leu Ile Phe
 20 25 30
 ata atg tat gtg gtc atc ctt ctg ggg aat ggt act ctc att tta atc 144
 Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
 35 40 45
 agc atc ttg gac cct cac ctt cac acc cct atg tac ttc ttt ctg ggg 192
 Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 aac ctc tcc ttc ttg gac atc tgc tac acc acc acc tct att ccc tcc 240
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser
 65 70 75 80
 aca cta gtg agc ttc ctt tca gaa aga aag acc att tcc ttt tct ggc 288
 Thr Leu Val Ser Phe Leu Ser Glu Arg Lys Thr Ile Ser Phe Ser Gly
 85 90 95
 tgt gca gtg cag atg ttc ctt ggc ttg gcc atg ggg aca aca gag tgt 336
 Cys Ala Val Gln Met Phe Leu Gly Leu Ala Met Gly Thr Thr Glu Cys
 100 105 110
 gtg ctt ctg ggc atg atg gcc ttt gac cgc tat gtg gct atc tgc aac 384
 Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 cct ctg aga tat ccc atc atc atg agc aag aat gcc tat gta ccc atg 432
 Pro Leu Arg Tyr Pro Ile Ile Met Ser Lys Asn Ala Tyr Val Pro Met
 130 135 140
 gct gtt ggg tcc tgg ttt gca ggg att gtc aac tct gca gta caa act 480
 Ala Val Gly Ser Trp Phe Ala Gly Ile Val Asn Ser Ala Val Gln Thr
 145 150 155 160
 aca ttt gta gta caa ttg cct ttc tgc agg aag aat gtc atc aat cat 528
 Thr Phe Val Val Gln Leu Pro Phe Cys Arg Lys Asn Val Ile Asn His
 165 170 175
 ttc tca tgt gaa att cta gct gtc atg aag ttg gcc tgt gct gac atc 576
 Phe Ser Cys Glu Ile Leu Ala Val Met Lys Leu Ala Cys Ala Asp Ile
 180 185 190
 tca ggc aat gag ttc ctc atg ctt gtg gcc aca ata ttg ttc aca ttg 624

Ser Gly Asn Glu Phe Leu Met Leu Val Ala Thr Ile Leu Phe Thr Leu
 195 200 205

atg cca ctg ctc ttg ata gtt atc tct tac tca tta atc att tcc agc 672
 Met Pro Leu Leu Leu Ile Val Ile Ser Tyr Ser Leu Ile Ile Ser Ser
 210 215 220

atc ctc aag att cac tcc tct gag ggg aga agc aaa gct ttc tct acc 720
 Ile Leu Lys Ile His Ser Ser Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240

tgc tca gcc cat ctg act gtg gtc ata ata ttc tat ggg acc atc ctc 768
 Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu
 245 250 255

ttc atg tat atg aag ccc aag tct aaa gag aca ctt aat tca gat gac 816
 Phe Met Tyr Met Lys Pro Lys Ser Lys Glu Thr Leu Asn Ser Asp Asp
 260 265 270

ttg gat gct acc gac aaa att ata tcc atg ttc tat ggg gtg atg act 864
 Leu Asp Ala Thr Asp Lys Ile Ile Ser Met Phe Tyr Gly Val Met Thr
 275 280 285

ccc atg atg aat cct tta atc tac agt ctt aga aac aag gat gtg aaa 912
 Pro Met Met Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

gag gca gta aaa cac cta ccg aac aga agg ttc ttt agc aag tga 957
 Glu Ala Val Lys His Leu Pro Asn Arg Arg Phe Phe Ser Lys
 305 310 315

<210> 152
 <211> 318
 <212> PRT
 <213> Homo Sapiens

<400> 152

Met Glu Trp Glu Asn Gln Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
 1 5 10 15

His Ser Val His Pro Arg Leu Glu Leu Leu Phe Phe Val Leu Ile Phe
 20 25 30

Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
 35 40 45

Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser
 65 70 75 80

Thr Leu Val Ser Phe Leu Ser Glu Arg Lys Thr Ile Ser Phe Ser Gly
 85 90 95

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Cys Ala Val Gln Met Phe Leu Gly Leu Ala Met Gly Thr Thr Glu Cys
 100 105 110

Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Pro Ile Ile Met Ser Lys Asn Ala Tyr Val Pro Met
 130 135 140

Ala Val Gly Ser Trp Phe Ala Gly Ile Val Asn Ser Ala Val Gln Thr
 145 150 155 160

Thr Phe Val Val Gln Leu Pro Phe Cys Arg Lys Asn Val Ile Asn His
 165 170 175

Phe Ser Cys Glu Ile Leu Ala Val Met Lys Leu Ala Cys Ala Asp Ile
 180 185 190

Ser Gly Asn Glu Phe Leu Met Leu Val Ala Thr Ile Leu Phe Thr Leu
 195 200 205

Met Pro Leu Leu Leu Ile Val Ile Ser Tyr Ser Leu Ile Ile Ser Ser
 210 215 220

Ile Leu Lys Ile His Ser Ser Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu
 245 250 255

Phe Met Tyr Met Lys Pro Lys Ser Lys Glu Thr Leu Asn Ser Asp Asp
 260 265 270

Leu Asp Ala Thr Asp Lys Ile Ile Ser Met Phe Tyr Gly Val Met Thr
 275 280 285

Pro Met Met Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Glu Ala Val Lys His Leu Pro Asn Arg Arg Phe Phe Ser Lys
 305 310 315

<210> 153
 <211> 954
 <212> DNA

<213> Homo Sapiens

<220>

<221> CDS

<222> (1)..(951)

<223>

<400> 153

atg	caa	cca	tat	acc	aaa	aac	tgg	acc	cag	gta	act	gaa	ttt	gtc	atg	48
Met	Gln	Pro	Tyr	Thr	Lys	Asn	Trp	Thr	Gln	Val	Thr	Glu	Phe	Val	Met	
1				5					10					15		

atg	ggc	ttt	gct	ggc	atc	cat	gaa	gca	cac	ctc	ctc	ttc	ttc	ata	ctc	96
Met	Gly	Phe	Ala	Gly	Ile	His	Glu	Ala	His	Leu	Leu	Phe	Phe	Ile	Leu	
			20					25					30			

ttc	ctc	acc	atg	tac	ctg	ttc	acc	ttg	gtg	gag	aat	ttg	gcc	atc	att	144
Phe	Leu	Thr	Met	Tyr	Leu	Phe	Thr	Leu	Val	Glu	Asn	Leu	Ala	Ile	Ile	
		35					40					45				

tta	gtg	gtg	ggg	ttg	gac	cac	cga	cta	cgg	aga	ccc	atg	tat	ttc	ttc	192
Leu	Val	Val	Gly	Leu	Asp	His	Arg	Leu	Arg	Arg	Pro	Met	Tyr	Phe	Phe	
	50					55					60					

ctg	aca	cac	ttg	tcc	tgc	ctt	gaa	atc	tgg	tac	act	tct	gtt	aca	gtg	240
Leu	Thr	His	Leu	Ser	Cys	Leu	Glu	Ile	Trp	Tyr	Thr	Ser	Val	Thr	Val	
65					70				75					80		

ccc	aag	atg	ctg	gct	ggg	ttt	att	ggg	gtg	gat	ggg	ggc	aag	aat	atc	288
Pro	Lys	Met	Leu	Ala	Gly	Phe	Ile	Gly	Val	Asp	Gly	Gly	Lys	Asn	Ile	
				85					90					95		

tct	tat	gct	ggg	tgc	cta	tcc	cag	ctc	ttc	atc	ttc	acc	ttt	ctt	ggg	336
Ser	Tyr	Ala	Gly	Cys	Leu	Ser	Gln	Leu	Phe	Ile	Phe	Thr	Phe	Leu	Gly	
			100					105					110			

gca	act	gag	tgt	ttc	cta	ctg	gct	gcc	atg	gcc	tat	gat	cgt	tat	gtg	384
Ala	Thr	Glu	Cys	Phe	Leu	Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Val	
		115					120					125				

gcc	att	tgt	atg	cct	ctc	cac	tat	ggg	gct	ttt	gtg	tcc	tgg	ggc	acc	432
Ala	Ile	Cys	Met	Pro	Leu	His	Tyr	Gly	Ala	Phe	Val	Ser	Trp	Gly	Thr	
	130					135					140					

tgc	atc	cgt	ctg	gca	gct	gcc	tgt	tgg	ctg	gta	ggg	ttc	ctc	aca	ccc	480
Cys	Ile	Arg	Leu	Ala	Ala	Ala	Cys	Trp	Leu	Val	Gly	Phe	Leu	Thr	Pro	
145				150					155					160		

atc	ttg	cca	atc	tac	ctc	ttg	tct	cag	cta	aca	ttt	tgt	ggc	cca	aat	528
Ile	Leu	Pro	Ile	Tyr	Leu	Leu	Ser	Gln	Leu	Thr	Phe	Cys	Gly	Pro	Asn	
			165					170					175			

gtc	att	gac	cat	ttc	tcc	tgt	gat	gcc	tca	ccc	ttg	cta	gcc	ttg	tgc	576
Val	Ile	Asp	His	Phe	Ser	Cys	Asp	Ala	Ser	Pro	Leu	Leu	Ala	Leu	Ser	
			180					185					190			

tgc	tca	gat	gtc	act	tgg	aag	gag	act	gtg	gat	ttc	ctg	gtg	tct	ctg	624
Cys	Ser	Asp	Val	Thr	Trp	Lys	Glu	Thr	Val	Asp	Phe	Leu	Val	Ser	Leu	
		195					200					205				

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gct gtg cta ctg gcc tcc tct atg gtc att gct gtg tcc tat ggc aac 672
 Ala Val Leu Leu Ala Ser Ser Met Val Ile Ala Val Ser Tyr Gly Asn
 210 215 220

atc gtc tgg aca ctg ctg cac atc cgc tca gct gct gag cgc tgg aag 720
 Ile Val Trp Thr Leu Leu His Ile Arg Ser Ala Ala Glu Arg Trp Lys
 225 230 235 240

gcc ttc tct acc tgt gca gct cac ctg act gtg gtg agc ctc ttc tat 768
 Ala Phe Ser Thr Cys Ala Ala His Leu Thr Val Val Ser Leu Phe Tyr
 245 250 255

ggc act ctt ttc ttt atg tat gtc cag acc aag gtg acc tcc tcc atc 816
 Gly Thr Leu Phe Phe Met Tyr Val Gln Thr Lys Val Thr Ser Ser Ile
 260 265 270

aac ttc aac aag gtg gta tct gtc ttc tac tct gtt gtc acg ccc atg 864
 Asn Phe Asn Lys Val Val Ser Val Phe Tyr Ser Val Val Thr Pro Met
 275 280 285

ctc aat cct ctc atc tac agt ctt agg aac aag gaa gtg aag gga gct 912
 Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Gly Ala
 290 295 300

ctg ggt cga gtc ttt tct ctc aac ttt tgg aag gga cag tga 954
 Leu Gly Arg Val Phe Ser Leu Asn Phe Trp Lys Gly Gln
 305 310 315

<210> 154
 <211> 317
 <212> PRT
 <213> Homo Sapiens

<400> 154

Met Gln Pro Tyr Thr Lys Asn Trp Thr Gln Val Thr Glu Phe Val Met
 1 5 10 15

Met Gly Phe Ala Gly Ile His Glu Ala His Leu Leu Phe Phe Ile Leu
 20 25 30

Phe Leu Thr Met Tyr Leu Phe Thr Leu Val Glu Asn Leu Ala Ile Ile
 35 40 45

Leu Val Val Gly Leu Asp His Arg Leu Arg Arg Pro Met Tyr Phe Phe
 50 55 60

Leu Thr His Leu Ser Cys Leu Glu Ile Trp Tyr Thr Ser Val Thr Val
 65 70 75 80

Pro Lys Met Leu Ala Gly Phe Ile Gly Val Asp Gly Gly Lys Asn Ile
 85 90 95

Ser Tyr Ala Gly Cys Leu Ser Gln Leu Phe Ile Phe Thr Phe Leu Gly

100	105	110
Ala Thr Glu Cys Phe Leu Leu 115	Ala Ala Met Ala Tyr 120	Asp Arg Tyr Val 125
Ala Ile Cys Met Pro Leu His 130	Tyr Gly Ala Phe Val 135	Ser Trp Gly Thr 140
Cys Ile Arg Leu Ala Ala Ala Cys Trp Leu Val Gly Phe Leu Thr Pro 145	150	155
Ile Leu Pro Ile Tyr Leu Leu Ser Gln Leu Thr Phe Cys Gly Pro Asn 165	170	175
Val Ile Asp His Phe Ser Cys Asp Ala Ser Pro Leu Leu Ala Leu Ser 180	185	190
Cys Ser Asp Val Thr Trp Lys Glu Thr Val Asp Phe Leu Val Ser Leu 195	200	205
Ala Val Leu Leu Ala Ser Ser Met Val Ile Ala Val Ser Tyr Gly Asn 210	215	220
Ile Val Trp Thr Leu Leu His Ile Arg Ser Ala Ala Glu Arg Trp Lys 225	230	235
Ala Phe Ser Thr Cys Ala Ala His Leu Thr Val Val Ser Leu Phe Tyr 245	250	255
Gly Thr Leu Phe Phe Met Tyr Val Gln Thr Lys Val Thr Ser Ser Ile 260	265	270
Asn Phe Asn Lys Val Val Ser Val Phe Tyr Ser Val Val Thr Pro Met 275	280	285
Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Gly Ala 290	295	300
Leu Gly Arg Val Phe Ser Leu Asn Phe Trp Lys Gly Gln 305	310	315

<210> 155
 <211> 978
 <212> DNA
 <213> Homo Sapiens

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<220>

<221> CDS

<222> (1) .. (975)

<223>

<400> 155
 atg acc acc ata att ctg gaa gta gat aat cat aca gtg aca aca cgt 48
 Met Thr Thr Ile Ile Leu Glu Val Asp Asn His Thr Val Thr Thr Arg
 1 5 10 15
 ttc att ctt ctg ggg ttt cca aca cga cca gcc ttc cag ctt ctc ttt 96
 Phe Ile Leu Leu Gly Phe Pro Thr Arg Pro Ala Phe Gln Leu Leu Phe
 20 25 30
 ttc tcc att ttc ctg gca acc tat ctg ctg aca ctg ctg gag aat ctt 144
 Phe Ser Ile Phe Leu Ala Thr Tyr Leu Leu Thr Leu Leu Glu Asn Leu
 35 40 45
 ctt atc atc tta gct atc cac agt gat ggg cag ctg cat aag ccc atg 192
 Leu Ile Ile Leu Ala Ile His Ser Asp Gly Gln Leu His Lys Pro Met
 50 55 60
 tac ttc ttc ttg agc cac ctc tcc ttc ctg gag atg tgg tat gtc aca 240
 Tyr Phe Phe Leu Ser His Leu Ser Phe Leu Glu Met Trp Tyr Val Thr
 65 70 75 80
 gtc atc agc ccc aag atg ctt gtt gac ttc ctc agt cat gac aag agt 288
 Val Ile Ser Pro Lys Met Leu Val Asp Phe Leu Ser His Asp Lys Ser
 85 90 95
 att tcc ttc aat ggc tgc atg act caa ctt tac ttt ttt gtg acc ttt 336
 Ile Ser Phe Asn Gly Cys Met Thr Gln Leu Tyr Phe Phe Val Thr Phe
 100 105 110
 gtc tgc act gag tac atc ctt ctt gct atc atg gcc ttt gac cgc tat 384
 Val Cys Thr Glu Tyr Ile Leu Leu Ala Ile Met Ala Phe Asp Arg Tyr
 115 120 125
 gta gcc att tgt aat cca cta cgc tac cca gtc atc atg acc aac cag 432
 Val Ala Ile Cys Asn Pro Leu Arg Tyr Pro Val Ile Met Thr Asn Gln
 130 135 140
 ctc tgt ggc aca ctg gct gga gga tgc tgg ttc tgt gga ctc atg act 480
 Leu Cys Gly Thr Leu Ala Gly Gly Cys Trp Phe Cys Gly Leu Met Thr
 145 150 155 160
 gcc atg att aag atg gtt ttt ata gca caa ctt cac tac tgt ggc atg 528
 Ala Met Ile Lys Met Val Phe Ile Ala Gln Leu His Tyr Cys Gly Met
 165 170 175
 cct cag atc aat cac tac ttt tgt gat atc tct cca ctc ctt aac gtc 576
 Pro Gln Ile Asn His Tyr Phe Cys Asp Ile Ser Pro Leu Leu Asn Val
 180 185 190
 tcc tgt gag gat gcc tca cag gct gag atg gtg gac ttc ttc ttg gcc 624
 Ser Cys Glu Asp Ala Ser Gln Ala Glu Met Val Asp Phe Phe Leu Ala
 195 200 205
 ctc atg gtc att gct att cct ctt tgt gtt gtg gtg gca tcc tac gct 672
 Leu Met Val Ile Ala Ile Pro Leu Cys Val Val Val Ala Ser Tyr Ala

210	215	220	
gct atc ctt gcc acc atc ctc agg atc cct tct gct cag ggc cgc caa			720
Ala Ile Leu Ala Thr Ile Leu Arg Ile Pro Ser Ala Gln Gly Arg Gln			
225	230	235	240
aag gca ttc tcc acc tgt gcc tcc cac ctg acc gtc gta att ctc ttc			768
Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Ile Leu Phe			
	245	250	255
tat tcc atg aca ctt ttc acc tat gcc cgt ccc aaa ctc atg tat gcc			816
Tyr Ser Met Thr Leu Phe Thr Tyr Ala Arg Pro Lys Leu Met Tyr Ala			
	260	265	270
tac aat tcc aac aaa gtg gta tct gtt ctc tac act gtc att gtt cca			864
Tyr Asn Ser Asn Lys Val Val Ser Val Leu Tyr Thr Val Ile Val Pro			
	275	280	285
ctc ctc aac ccc atc att tac tgt ctg agg aac cat gaa gta aag gca			912
Leu Leu Asn Pro Ile Ile Tyr Cys Leu Arg Asn His Glu Val Lys Ala			
	290	295	300
gcc ctc aga aag acc ata cat tgc aga gga agt ggg ccc cag gga aat			960
Ala Leu Arg Lys Thr Ile His Cys Arg Gly Ser Gly Pro Gln Gly Asn			
305	310	315	320
ggg gct ttc agt agt taa			978
Gly Ala Phe Ser Ser			
	325		

<210> 156
 <211> 325
 <212> PRT
 <213> Homo Sapiens

<400> 156

Met Thr Thr Ile Ile Leu Glu Val Asp Asn His Thr Val Thr Thr Arg
 1 5 10 15

Phe Ile Leu Leu Gly Phe Pro Thr Arg Pro Ala Phe Gln Leu Leu Phe
 20 25 30

Phe Ser Ile Phe Leu Ala Thr Tyr Leu Leu Thr Leu Leu Glu Asn Leu
 35 40 45

Leu Ile Ile Leu Ala Ile His Ser Asp Gly Gln Leu His Lys Pro Met
 50 55 60

Tyr Phe Phe Leu Ser His Leu Ser Phe Leu Glu Met Trp Tyr Val Thr
 65 70 75 80

Val Ile Ser Pro Lys Met Leu Val Asp Phe Leu Ser His Asp Lys Ser
 85 90 95

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Ile Ser Phe Asn Gly Cys Met Thr Gln Leu Tyr Phe Phe Val Thr Phe
 100 105 110

Val Cys Thr Glu Tyr Ile Leu Leu Ala Ile Met Ala Phe Asp Arg Tyr
 115 120 125

Val Ala Ile Cys Asn Pro Leu Arg Tyr Pro Val Ile Met Thr Asn Gln
 130 135 140

Leu Cys Gly Thr Leu Ala Gly Gly Cys Trp Phe Cys Gly Leu Met Thr
 145 150 155 160

Ala Met Ile Lys Met Val Phe Ile Ala Gln Leu His Tyr Cys Gly Met
 165 170 175

Pro Gln Ile Asn His Tyr Phe Cys Asp Ile Ser Pro Leu Leu Asn Val
 180 185 190

Ser Cys Glu Asp Ala Ser Gln Ala Glu Met Val Asp Phe Phe Leu Ala
 195 200 205

Leu Met Val Ile Ala Ile Pro Leu Cys Val Val Val Ala Ser Tyr Ala
 210 215 220

Ala Ile Leu Ala Thr Ile Leu Arg Ile Pro Ser Ala Gln Gly Arg Gln
 225 230 235 240

Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Ile Leu Phe
 245 250 255

Tyr Ser Met Thr Leu Phe Thr Tyr Ala Arg Pro Lys Leu Met Tyr Ala
 260 265 270

Tyr Asn Ser Asn Lys Val Val Ser Val Leu Tyr Thr Val Ile Val Pro
 275 280 285

Leu Leu Asn Pro Ile Ile Tyr Cys Leu Arg Asn His Glu Val Lys Ala
 290 295 300

Ala Leu Arg Lys Thr Ile His Cys Arg Gly Ser Gly Pro Gln Gly Asn
 305 310 315 320

Gly Ala Phe Ser Ser
 325

<210> 157
 <211> 927
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(924)
 <223>

<400> 157
 atg gtc acc gaa ttc ctg ttg ctg ggt ttt tcc agc ctt ggt gaa att 48
 Met Val Thr Glu Phe Leu Leu Leu Gly Phe Ser Ser Leu Gly Glu Ile
 1 5 10 15
 cag ctg gcc ctc ttt gta gtt ttt ctt ttt ctg tat cta gtc att ctt 96
 Gln Leu Ala Leu Phe Val Val Phe Leu Phe Leu Tyr Leu Val Ile Leu
 20 25 30
 agt ggc aat gtc acc att atc agt gtc atc cac ctg gat aaa agc ctc 144
 Ser Gly Asn Val Thr Ile Ile Ser Val Ile His Leu Asp Lys Ser Leu
 35 40 45
 cac aca cca atg tac ttc ttc ctt ggc att ctc tca aca tct gag acc 192
 His Thr Pro Met Tyr Phe Phe Leu Gly Ile Leu Ser Thr Ser Glu Thr
 50 55 60
 ttc tac acc ttt gtc att cta ccc aag atg ctc atc aat cta ctt tct 240
 Phe Tyr Thr Phe Val Ile Leu Pro Lys Met Leu Ile Asn Leu Leu Ser
 65 70 75 80
 gtg gcc agg aca atc tcc ttc aac tgt tgt gct ctt caa atg ttc ttc 288
 Val Ala Arg Thr Ile Ser Phe Asn Cys Cys Ala Leu Gln Met Phe Phe
 85 90 95
 ttc ctt ggt ttt gcc att acc aac tgc ctg cta ttg ggt gtg atg ggt 336
 Phe Leu Gly Phe Ala Ile Thr Asn Cys Leu Leu Leu Gly Val Met Gly
 100 105 110
 tat gat cgc tat gct gcc att tgt cac cct ctg cat tac ccc act ctt 384
 Tyr Asp Arg Tyr Ala Ala Ile Cys His Pro Leu His Tyr Pro Thr Leu
 115 120 125
 atg agc tgg cag gtg tgt gga aaa ctg gca gct gcc tgt gca att ggt 432
 Met Ser Trp Gln Val Cys Gly Lys Leu Ala Ala Ala Cys Ala Ile Gly
 130 135 140
 ggc ttc ttg gcc tct ctt aca gta gta aat tta gtt ttc agc ctc cct 480
 Gly Phe Leu Ala Ser Leu Thr Val Val Asn Leu Val Phe Ser Leu Pro
 145 150 155 160
 ttt tgt agc gcc aac aaa gtc aat cat tac ttc tgt gac atc tca gca 528
 Phe Cys Ser Ala Asn Lys Val Asn His Tyr Phe Cys Asp Ile Ser Ala
 165 170 175
 gtc att ctt ctg gct tgt acc aac aca gat gtt aac gaa ttt gtg ata 576
 Val Ile Leu Leu Ala Cys Thr Asn Thr Asp Val Asn Glu Phe Val Ile
 180 185 190
 ttc att tgt gga gtt ctt gta ctt gtg gtt ccc ttt ctg ttt atc tgt 624

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Phe Ile Cys Gly Val Leu Val Leu Val Val Pro Phe Leu Phe Ile Cys
 195 200 205
 gtt tct tat ctc tgc att ctg agg act atc ctg aag att ccc tca gct 672
 Val Ser Tyr Leu Cys Ile Leu Arg Thr Ile Leu Lys Ile Pro Ser Ala
 210 215 220
 gag ggc aga cgg aaa gcg ttt tcc acc tgc gcc tct cac ctc agt gtt 720
 Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ala Ser His Leu Ser Val
 225 230 235 240
 gtt att gtt cat tat ggc tgt gct tcc ttc atc tac ctg agg cct aca 768
 Val Ile Val His Tyr Gly Cys Ala Ser Phe Ile Tyr Leu Arg Pro Thr
 245 250 255
 gca aac tat gtg tcc aac aaa gac agg ctg gtg acg gtg aca tac acg 816
 Ala Asn Tyr Val Ser Asn Lys Asp Arg Leu Val Thr Val Thr Tyr Thr
 260 265 270
 att gtc act cca tta cta aac ccc atg gtt tat agc ctc aga aac aag 864
 Ile Val Thr Pro Leu Leu Asn Pro Met Val Tyr Ser Leu Arg Asn Lys
 275 280 285
 gat gtc caa ctt gct atc aga aaa gtg ttg ggc aag aaa ggt tct cta 912
 Asp Val Gln Leu Ala Ile Arg Lys Val Leu Gly Lys Lys Gly Ser Leu
 290 295 300
 aaa cta tat aat tga 927
 Lys Leu Tyr Asn
 305

<210> 158
 <211> 308
 <212> PRT
 <213> Homo Sapiens

<400> 158

Met Val Thr Glu Phe Leu Leu Leu Gly Phe Ser Ser Leu Gly Glu Ile
 1 5 10 15

Gln Leu Ala Leu Phe Val Val Phe Leu Phe Leu Tyr Leu Val Ile Leu
 20 25 30

Ser Gly Asn Val Thr Ile Ile Ser Val Ile His Leu Asp Lys Ser Leu
 35 40 45

His Thr Pro Met Tyr Phe Phe Leu Gly Ile Leu Ser Thr Ser Glu Thr
 50 55 60

Phe Tyr Thr Phe Val Ile Leu Pro Lys Met Leu Ile Asn Leu Leu Ser
 65 70 75 80

Val Ala Arg Thr Ile Ser Phe Asn Cys Cys Ala Leu Gln Met Phe Phe
 85 90 95

Phe Leu Gly Phe Ala Ile Thr Asn Cys Leu Leu Leu Gly Val Met Gly
 100 105 110

Tyr Asp Arg Tyr Ala Ala Ile Cys His Pro Leu His Tyr Pro Thr Leu
 115 120 125

Met Ser Trp Gln Val Cys Gly Lys Leu Ala Ala Ala Cys Ala Ile Gly
 130 135 140

Gly Phe Leu Ala Ser Leu Thr Val Val Asn Leu Val Phe Ser Leu Pro
 145 150 155 160

Phe Cys Ser Ala Asn Lys Val Asn His Tyr Phe Cys Asp Ile Ser Ala
 165 170 175

Val Ile Leu Leu Ala Cys Thr Asn Thr Asp Val Asn Glu Phe Val Ile
 180 185 190

Phe Ile Cys Gly Val Leu Val Leu Val Val Pro Phe Leu Phe Ile Cys
 195 200 205

Val Ser Tyr Leu Cys Ile Leu Arg Thr Ile Leu Lys Ile Pro Ser Ala
 210 215 220

Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ala Ser His Leu Ser Val
 225 230 235 240

Val Ile Val His Tyr Gly Cys Ala Ser Phe Ile Tyr Leu Arg Pro Thr
 245 250 255

Ala Asn Tyr Val Ser Asn Lys Asp Arg Leu Val Thr Val Thr Tyr Thr
 260 265 270

Ile Val Thr Pro Leu Leu Asn Pro Met Val Tyr Ser Leu Arg Asn Lys
 275 280 285

Asp Val Gln Leu Ala Ile Arg Lys Val Leu Gly Lys Lys Gly Ser Leu
 290 295 300

Lys Leu Tyr Asn
 305

<210> 159
 <211> 927
 <212> DNA

<213> Homo Sapiens

<220>

<221> CDS

<222> (1)..(924)

<223>

<400> 159
 atg acc atg gaa aat tat tct atg gca gct cag ttt gtc tta gat ggt 48
 Met Thr Met Glu Asn Tyr Ser Met Ala Ala Gln Phe Val Leu Asp Gly
 1 5 10 15
 tta aca cag caa gca gag ctc cag ctg ccc ctc ttc ctc ctg ttc ctg 96
 Leu Thr Gln Gln Ala Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
 20 25 30
 gga atc tat gtg gtc aca gta gtg ggc aac ctg ggc atg att ctc ctg 144
 Gly Ile Tyr Val Val Thr Val Val Gly Asn Leu Gly Met Ile Leu Leu
 35 40 45
 att gca gtc agc cct cta ctt cac acc ccc atg tac tat ttc ctc agc 192
 Ile Ala Val Ser Pro Leu Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
 50 55 60
 agc ttg tcc ttc gtc gat ttc tgc tat tcc tct gtc att act ccc aaa 240
 Ser Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Val Ile Thr Pro Lys
 65 70 75 80
 atg ctg gtg aac ttc cta gga aag aag aat aca atc ctt tac tct gag 288
 Met Leu Val Asn Phe Leu Gly Lys Lys Asn Thr Ile Leu Tyr Ser Glu
 85 90 95
 tgc atg gtc cag ctc ttt ttc ttt gtg gtc ttt gtg gtg gct gag ggt 336
 Cys Met Val Gln Leu Phe Phe Phe Val Val Phe Val Val Ala Glu Gly
 100 105 110
 tac ctc ctg act gcc atg gca tat gat cgc tat gtt gcc atc tgt agc 384
 Tyr Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser
 115 120 125
 cca ctg ctt tat aat gcg atc atg tcc tca tgg gtc tgc tca ctg cta 432
 Pro Leu Leu Tyr Asn Ala Ile Met Ser Ser Trp Val Cys Ser Leu Leu
 130 135 140
 gtg ctg gct gcc ttc ttc ttg ggc ttt ctc tct gcc ttg act cat aca 480
 Val Leu Ala Ala Phe Phe Leu Gly Phe Leu Ser Ala Leu Thr His Thr
 145 150 155 160
 agt gcc atg atg aaa ctg tcc ttt tgc aaa tcc cac att atc aac cat 528
 Ser Ala Met Met Lys Leu Ser Phe Cys Lys Ser His Ile Ile Asn His
 165 170 175
 tac ttc tgt gat gtt ctt ccc ctc ctc aat ctc tcc tgc tcc aac aca 576
 Tyr Phe Cys Asp Val Leu Pro Leu Leu Asn Leu Ser Cys Ser Asn Thr
 180 185 190
 cac ctc aat gag ctt cta ctt ttt atc att gcg ggg ttt aac acc ttg 624
 His Leu Asn Glu Leu Leu Leu Phe Ile Ile Ala Gly Phe Asn Thr Leu
 195 200 205

gtg ccc acc cta gct gtt gct gtc tcc tat gcc ttc atc ctc tac agc 672
 Val Pro Thr Leu Ala Val Ala Val Ser Tyr Ala Phe Ile Leu Tyr Ser
 210 215 220

 atc ctt cac atc cgc tcc tca gag ggc cgg tcc aaa gct ttt gga aca 720
 Ile Leu His Ile Arg Ser Ser Glu Gly Arg Ser Lys Ala Phe Gly Thr
 225 230 235 240

 tgc agc tct cat ctc atg gct gtg gtg atc ttc ttt ggg tcc att acc 768
 Cys Ser Ser His Leu Met Ala Val Val Ile Phe Phe Gly Ser Ile Thr
 245 250 255

 ttc atg tat ttc aag ccc cct tca agt aac tcc ctg gac cag gag aag 816
 Phe Met Tyr Phe Lys Pro Pro Ser Ser Asn Ser Leu Asp Gln Glu Lys
 260 265 270

 gtg tcc tct gtg ttc tac acc acg gtg atc ccc atg ctg aac cct tta 864
 Val Ser Ser Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

 ata tac agt ctg agg aat aag gat gtg aag aaa gca tta agg aag gtc 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu Arg Lys Val
 290 295 300

 tta gta gga aaa tga 927
 Leu Val Gly Lys
 305

<210> 160
 <211> 308
 <212> PRT
 <213> Homo Sapiens

<400> 160

Met Thr Met Glu Asn Tyr Ser Met Ala Ala Gln Phe Val Leu Asp Gly
1 5 10 15

Leu Thr Gln Gln Ala Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
20 25 30

Gly Ile Tyr Val Val Thr Val Val Gly Asn Leu Gly Met Ile Leu Leu
35 40 45

Ile Ala Val Ser Pro Leu Leu His Thr Pro Met Tyr Tyr Phe Leu Ser
50 55 60

Ser Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Val Ile Thr Pro Lys
65 70 75 80

Met Leu Val Asn Phe Leu Gly Lys Lys Asn Thr Ile Leu Tyr Ser Glu
85 90 95

Cys Met Val Gln Leu Phe Phe Phe Val Val Phe Val Val Ala Glu Gly

100 105 110
 Tyr Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser
 115 120 125
 Pro Leu Leu Tyr Asn Ala Ile Met Ser Ser Trp Val Cys Ser Leu Leu
 130 135 140
 Val Leu Ala Ala Phe Phe Leu Gly Phe Leu Ser Ala Leu Thr His Thr
 145 150 155 160
 Ser Ala Met Met Lys Leu Ser Phe Cys Lys Ser His Ile Ile Asn His
 165 170 175
 Tyr Phe Cys Asp Val Leu Pro Leu Leu Asn Leu Ser Cys Ser Asn Thr
 180 185 190
 His Leu Asn Glu Leu Leu Leu Phe Ile Ile Ala Gly Phe Asn Thr Leu
 195 200 205
 Val Pro Thr Leu Ala Val Ala Val Ser Tyr Ala Phe Ile Leu Tyr Ser
 210 215 220
 Ile Leu His Ile Arg Ser Ser Glu Gly Arg Ser Lys Ala Phe Gly Thr
 225 230 235 240
 Cys Ser Ser His Leu Met Ala Val Val Ile Phe Phe Gly Ser Ile Thr
 245 250 255
 Phe Met Tyr Phe Lys Pro Pro Ser Ser Asn Ser Leu Asp Gln Glu Lys
 260 265 270
 Val Ser Ser Val Phe Tyr Thr Thr Val Ile Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu Arg Lys Val
 290 295 300
 Leu Val Gly Lys
 305

<210> 161
 <211> 915
 <212> DNA
 <213> Homo Sapiens

<220>

<221> CDS

<222> (1)..(912)

<223>

<400> 161

atg	ctg	gct	aga	aac	aac	tcc	tta	gtg	act	gaa	ttt	att	ctt	gct	gga	48
Met	Leu	Ala	Arg	Asn	Asn	Ser	Leu	Val	Thr	Glu	Phe	Ile	Leu	Ala	Gly	
1				5					10					15		

tta	aca	gat	cat	cca	gag	ttc	cag	caa	ccc	ctc	ttt	ttc	ctg	ttt	cta	96
Leu	Thr	Asp	His	Pro	Glu	Phe	Gln	Gln	Pro	Leu	Phe	Phe	Leu	Phe	Leu	
			20					25					30			

gtg	gtc	tac	att	gtc	acc	atg	gta	ggc	aac	ctt	ggc	ttg	atc	att	ctt	144
Val	Val	Tyr	Ile	Val	Thr	Met	Val	Gly	Asn	Leu	Gly	Leu	Ile	Ile	Leu	
		35					40					45				

ttc	ggt	cta	aat	tct	cac	ctc	cac	aca	cca	atg	tac	tat	ttc	ctc	ttc	192
Phe	Gly	Leu	Asn	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Tyr	Phe	Leu	Phe	
	50					55					60					

aat	ctc	tcc	ttc	att	gat	ctc	tgt	tac	tcc	tct	gtt	ttc	act	ccc	aaa	240
Asn	Leu	Ser	Phe	Ile	Asp	Leu	Cys	Tyr	Ser	Ser	Val	Phe	Thr	Pro	Lys	
65					70				75					80		

atg	cta	atg	aac	ttt	gta	tca	aaa	aag	aat	att	atc	tcc	tat	gtt	ggg	288
Met	Leu	Met	Asn	Phe	Val	Ser	Lys	Lys	Asn	Ile	Ile	Ser	Tyr	Val	Gly	
			85						90					95		

tgc	atg	act	cag	ctg	ttt	ttc	ttt	ctc	ttt	ttt	gtc	atc	tct	gaa	tgt	336
Cys	Met	Thr	Gln	Leu	Phe	Phe	Phe	Leu	Phe	Phe	Val	Ile	Ser	Glu	Cys	
			100					105					110			

tac	atg	ttg	acc	tca	atg	gca	tat	gat	cgc	tat	gtg	gcc	atc	tgt	aat	384
Tyr	Met	Leu	Thr	Ser	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	
		115					120					125				

cca	ttg	ctg	tat	aag	gtc	acc	atg	tcc	cat	cag	gtc	tgt	tct	atg	ctc	432
Pro	Leu	Leu	Tyr	Lys	Val	Thr	Met	Ser	His	Gln	Val	Cys	Ser	Met	Leu	
	130					135					140					

act	ttt	gct	gct	tac	ata	atg	gga	ttg	gct	gga	gcc	acg	gcc	cac	acc	480
Thr	Phe	Ala	Ala	Tyr	Ile	Met	Gly	Leu	Ala	Gly	Ala	Thr	Ala	His	Thr	
145					150				155					160		

ggg	tgc	atg	ctt	aga	ctc	acc	ttc	tgc	agt	gct	aat	atc	atc	aac	cat	528
Gly	Cys	Met	Leu	Arg	Leu	Thr	Phe	Cys	Ser	Ala	Asn	Ile	Ile	Asn	His	
				165					170					175		

tac	ttg	tgt	gac	ata	ctc	ccc	ctc	ctc	cag	ctt	tcc	tgc	acc	agc	acc	576
Tyr	Leu	Cys	Asp	Ile	Leu	Pro	Leu	Leu	Gln	Leu	Ser	Cys	Thr	Ser	Thr	
			180					185					190			

tat	gtc	aac	gag	gtg	gtt	gtt	ctc	att	gtt	gtg	ggg	att	aat	atc	atg	624
Tyr	Val	Asn	Glu	Val	Val	Val	Leu	Ile	Val	Val	Gly	Ile	Asn	Ile	Met	
		195					200					205				

gta	ccc	agt	tgt	acc	atc	ctc	att	tct	tat	gtt	ttc	att	gtc	act	agc	672
Val	Pro	Ser	Cys	Thr	Ile	Leu	Ile	Ser	Tyr	Val	Phe	Ile	Val	Thr	Ser	
	210					215					220					

att ctt cat atc aaa tcc act caa gga aga tca aaa gcc ttc agt act 720
 Ile Leu His Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr 240
 225 230 235
 tgt agc tct cat gtc att gct ctg tct ctg ttt ttt ggg tca gcg gca 768
 Cys Ser Ser His Val Ile Ala Leu Ser Leu Phe Phe Gly Ser Ala Ala 255
 245 250
 ttc atg tat att aaa tat tct tct gga tct atg gag cag gga aaa gtt 816
 Phe Met Tyr Ile Lys Tyr Ser Ser Gly Ser Met Glu Gln Gly Lys Val 270
 260 265
 tct tct gtt ttc tac act aat gtg gtg ccc atg ctc aat cct ctc atc 864
 Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu Ile 285
 275 280
 tac agt ttg agg aac aag gat gtc aaa gtt gca ctg agg aaa gct ctg 912
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Lys Ala Leu 300
 290 295
 att 915

<210> 162
 <211> 304
 <212> PRT
 <213> Homo Sapiens

<400> 162

Met Leu Ala Arg Asn Asn Ser Leu Val Thr Glu Phe Ile Leu Ala Gly 15
 1 5 10

Leu Thr Asp His Pro Glu Phe Gln Gln Pro Leu Phe Phe Leu Phe Leu 30
 20 25

Val Val Tyr Ile Val Thr Met Val Gly Asn Leu Gly Leu Ile Ile Leu 45
 35 40

Phe Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe 60
 50 55

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys 80
 65 70 75

Met Leu Met Asn Phe Val Ser Lys Lys Asn Ile Ile Ser Tyr Val Gly 95
 85 90

Cys Met Thr Gln Leu Phe Phe Phe Leu Phe Phe Val Ile Ser Glu Cys 110
 100 105

Tyr Met Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn 125
 115 120

Pro Leu Leu Tyr Lys Val Thr Met Ser His Gln Val Cys Ser Met Leu
130 135 140

Thr Phe Ala Ala Tyr Ile Met Gly Leu Ala Gly Ala Thr Ala His Thr
145 150 155 160

Gly Cys Met Leu Arg Leu Thr Phe Cys Ser Ala Asn Ile Ile Asn His
165 170 175

Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
180 185 190

Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Ile Asn Ile Met
195 200 205

Val Pro Ser Cys Thr Ile Leu Ile Ser Tyr Val Phe Ile Val Thr Ser
210 215 220

Ile Leu His Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Val Ile Ala Leu Ser Leu Phe Phe Gly Ser Ala Ala
245 250 255

Phe Met Tyr Ile Lys Tyr Ser Ser Gly Ser Met Glu Gln Gly Lys Val
260 265 270

Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu Ile
275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Lys Ala Leu
290 295 300

<210> 163
<211> 942
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(939)
<223>

<400> 163
atg ctg gct aga aac aac tcc tta gtg act gaa ttt att ctt gct gga
Met Leu Ala Arg Asn Asn Ser Leu Val Thr Glu Phe Ile Leu Ala Gly
1 5 10 15

48

tta aca gat cat cca gag ttc cgg caa ccc ctc ttt ttc ctg ttt cta Leu Thr Asp His Pro Glu Phe Arg Gln Pro Leu Phe Phe Leu Phe Leu	96
20 25 30	
gtg atc tac att gtc acc atg gta ggc aac ctt ggc ttg atc act ctt Val Ile Tyr Ile Val Thr Met Val Gly Asn Leu Gly Leu Ile Thr Leu	144
35 40 45	
ttc ggt cta aat tct cac ctc cac aca cca atg tac tat ttc ctc ttc Phe Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe	192
50 55 60	
aat ctc tcc ttc att gat ctc tgt tac tcc tct gtt ttc act ccc aaa Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys	240
65 70 75 80	
atg cta atg aac ttt gtg tca aaa aag aat att atc tcc aat gtt ggg Met Leu Met Asn Phe Val Ser Lys Lys Asn Ile Ile Ser Asn Val Gly	288
85 90 95	
tgc atg act cgg ctg ttt ttc ttt ctc ttt ttc gtc atc tct gaa tgt Cys Met Thr Arg Leu Phe Phe Phe Leu Phe Phe Val Ile Ser Glu Cys	336
100 105 110	
tac atg ttg act tca atg gca tat gat cgc tat gtg gcc atc tgt aat Tyr Met Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn	384
115 120 125	
cca ttg ctg tat aag gtc acc atg tcc cat cag gtc tgt tct atg ctc Pro Leu Leu Tyr Lys Val Thr Met Ser His Gln Val Cys Ser Met Leu	432
130 135 140	
act ttt gct gct tac ata atg gga ttg gct gga gcc acg gcc cac acc Thr Phe Ala Ala Tyr Ile Met Gly Leu Ala Gly Ala Thr Ala His Thr	480
145 150 155 160	
ggg tgc atg ctt aga ctc acc ttc tgc agt gct aat atc atc aac cat Gly Cys Met Leu Arg Leu Thr Phe Cys Ser Ala Asn Ile Ile Asn His	528
165 170 175	
tac ttg tgt gac ata ctc ccc ctc ctc cag ctt tcc tgc acc agc acc Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr	576
180 185 190	
tat gtc aac gag gtg gtt gtt ctc att gtt gtg ggt act aat atc acg Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Thr Asn Ile Thr	624
195 200 205	
gta ccc agt tgt acc atc ctc att tct tat gtt ttc att gtc act agc Val Pro Ser Cys Thr Ile Leu Ile Ser Tyr Val Phe Ile Val Thr Ser	672
210 215 220	
att ctt cat atc aaa tcc act caa gga aga tca aaa gcc ttc agt act Ile Leu His Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr	720
225 230 235 240	
tgt agc tct cat gtc att gct ctg tct ctg ttt ttt ggg tca gcg gca Cys Ser Ser His Val Ile Ala Leu Ser Leu Phe Phe Gly Ser Ala Ala	768
245 250 255	

ttc atg tat att aaa tat tct tct gga tct atg gag cag gga aaa gtt 816
 Phe Met Tyr Ile Lys Tyr Ser Ser Gly Ser Met Glu Gln Gly Lys Val
 260 265 270

tct tct gtt ttc tac act aat gtg gtg ccc atg ctc aat ccc ctc atc 864
 Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Leu Ile
 275 280 285

tac agt ttg agg aac aag gat gtc aaa gtt gca ctg agg aaa gct ctg 912
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Lys Ala Leu
 290 295 300

att aaa att cag agg aga aat ata ttc taa 942
 Ile Lys Ile Gln Arg Arg Asn Ile Phe
 305 310

<210> 164

<211> 313

<212> PRT

<213> Homo Sapiens

<400> 164

Met Leu Ala Arg Asn Asn Ser Leu Val Thr Glu Phe Ile Leu Ala Gly
 1 5 10 15

Leu Thr Asp His Pro Glu Phe Arg Gln Pro Leu Phe Phe Leu Phe Leu
 20 25 30

Val Ile Tyr Ile Val Thr Met Val Gly Asn Leu Gly Leu Ile Thr Leu
 35 40 45

Phe Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe
 50 55 60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
 65 70 75 80

Met Leu Met Asn Phe Val Ser Lys Lys Asn Ile Ile Ser Asn Val Gly
 85 90 95

Cys Met Thr Arg Leu Phe Phe Phe Leu Phe Phe Val Ile Ser Glu Cys
 100 105 110

Tyr Met Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Leu Tyr Lys Val Thr Met Ser His Gln Val Cys Ser Met Leu
 130 135 140

Thr Phe Ala Ala Tyr Ile Met Gly Leu Ala Gly Ala Thr Ala His Thr

<400>	165																
atg	act	ctg	aga	aac	agc	tcc	tca	gtg	act	gag	ttt	atc	ctt	gtg	gga		
Met	Thr	Leu	Arg	Asn	Ser	Ser	Ser	Val	Thr	Glu	Phe	Ile	Leu	Val	Gly		
1				5					10					15			
tta	tca	gaa	cag	cca	gag	ctc	cag	ctc	cct	ctt	ttc	ctt	cta	ttc	tta		
Leu	Ser	Glu	Gln	Pro	Glu	Leu	Gln	Leu	Pro	Leu	Phe	Leu	Leu	Phe	Leu		

20						25						30							
ggg Gly	atc Ile	tat Tyr	gtg Val	ttc Phe	act Thr	gtg Val	gtg Val	ggc Gly	aac Asn	ttg Leu	ggc Gly	ttg Leu	atc Ile	acc Thr	tta Leu	144			
35						40						45							
att Ile	ggg Gly	ata Ile	aat Asn	cct Pro	agc Ser	ctt Leu	cac His	acc Thr	ccc Pro	atg Met	tac Tyr	ttt Phe	ttc Phe	ctc Leu	ttc Phe	192			
50						55						60							
aac Asn	ttg Leu	tcc Ser	ttt Phe	ata Ile	gat Asp	ctc Leu	tgt Cys	tat Tyr	tcc Ser	tgt Cys	gtg Val	ttt Phe	acc Thr	ccc Pro	aaa Lys	240			
65						70						75						80	
atg Met	ctg Leu	aat Asn	gac Asp	ttt Phe	gtt Val	tca Ser	gaa Glu	agt Ser	atc Ile	atc Ile	tct Ser	tat Tyr	gtg Val	gga Gly	tgt Cys	288			
85						90						95							
atg Met	act Thr	cag Gln	cta Leu	ttt Phe	ttc Phe	ttc Phe	tgt Cys	ttc Phe	ttt Phe	gtc Val	aat Asn	tct Ser	gag Glu	tgc Cys	tat Tyr	336			
100						105						110							
gtg Val	ttg Leu	gta Val	tca Ser	atg Met	gcc Ala	tat Tyr	gat Asp	cgc Arg	tat Tyr	gtg Val	gcc Ala	atc Ile	tgc Cys	aac Asn	ccc Pro	384			
115						120						125							
ctg Leu	ctc Leu	tac Tyr	atg Met	gtc Val	acc Thr	atg Met	tcc Ser	cca Pro	agg Arg	gtc Val	tgc Cys	ttt Phe	ctg Leu	ctg Leu	atg Met	432			
130						135						140							
ttt Phe	ggt Gly	tcc Ser	tat Tyr	gtg Val	gta Val	ggg Gly	ttt Phe	gct Ala	ggg Gly	gcc Ala	atg Met	gcc Ala	cac His	act Thr	gga Gly	480			
145						150						155						160	
agc Ser	atg Met	ctg Leu	cga Arg	ctg Leu	acc Thr	ttc Phe	tgt Cys	gat Asp	tcc Ser	aac Asn	gtc Val	att Ile	gac Asp	cat His	tat Tyr	528			
165						170						175							
ctg Leu	tgt Cys	gac Asp	gtt Val	ctc Leu	ccc Pro	ctc Leu	ttg Leu	cag Gln	ctc Leu	tcc Ser	tgc Cys	acc Thr	agc Ser	acc Thr	cat His	576			
180						185						190							
gtc Val	agt Ser	gag Glu	ctg Leu	gta Val	ttt Phe	ttc Phe	att Ile	gtt Val	gtt Val	gga Gly	gta Val	atc Ile	acc Thr	atg Met	cta Leu	624			
195						200						205							
tcc Ser	agc Ser	ata Ile	agc Ser	atc Ile	gtc Val	atc Ile	tct Ser	tac Tyr	gct Ala	ttg Leu	ata Ile	ctc Leu	tcc Ser	aac Asn	atc Ile	672			
210						215						220							
ctc Leu	tgt Cys	att Ile	cct Pro	tct Ser	gca Ala	gag Glu	ggc Gly	aga Arg	tcc Ser	aaa Lys	gcc Ala	ttt Phe	agc Ser	aca Thr	tgg Trp	720			
225						230						235						240	
ggc Gly	tcc Ser	cac His	ata Ile	att Ile	gct Ala	gtt Val	gct Ala	ctg Leu	ttt Phe	ttt Phe	ggg Gly	tca Ser	ggg Gly	aca Thr	ttc Phe	768			
245						250						255							
acc Thr	tac Tyr	tta Leu	aca Thr	aca Thr	tct Ser	ttt Phe	cct Pro	ggc Gly	tct Ser	atg Met	aac Asn	cat His	ggc Gly	aga Arg	ttt Phe	816			
260						265						270							

gcc tca gtc ttt tac acc aat gtg gtt ccc atg ctt aac cct tcg atc 864
 Ala Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Ser Ile
 275 280 285

tac agt ttg agg aat aag gat gat aaa ctt gcc ctg ggc aaa acc ctg 912
 Tyr Ser Leu Arg Asn Lys Asp Asp Lys Leu Ala Leu Gly Lys Thr Leu
 290 295 300

aag aga gtg ctc ttc taa 930
 Lys Arg Val Leu Phe
 305

<210> 166
 <211> 309
 <212> PRT
 <213> Homo Sapiens

<400> 166

Met Thr Leu Arg Asn Ser Ser Ser Val Thr Glu Phe Ile Leu Val Gly
 1 5 10 15

Leu Ser Glu Gln Pro Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
 20 25 30

Gly Ile Tyr Val Phe Thr Val Val Gly Asn Leu Gly Leu Ile Thr Leu
 35 40 45

Ile Gly Ile Asn Pro Ser Leu His Thr Pro Met Tyr Phe Phe Leu Phe
 50 55 60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Cys Val Phe Thr Pro Lys
 65 70 75 80

Met Leu Asn Asp Phe Val Ser Glu Ser Ile Ile Ser Tyr Val Gly Cys
 85 90 95

Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Val Asn Ser Glu Cys Tyr
 100 105 110

Val Leu Val Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro
 115 120 125

Leu Leu Tyr Met Val Thr Met Ser Pro Arg Val Cys Phe Leu Leu Met
 130 135 140

Phe Gly Ser Tyr Val Val Gly Phe Ala Gly Ala Met Ala His Thr Gly
 145 150 155 160

Ser Met Leu Arg Leu Thr Phe Cys Asp Ser Asn Val Ile Asp His Tyr
 165 170 175

Leu Cys Asp Val Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr His
 180 185 190

Val Ser Glu Leu Val Phe Phe Ile Val Val Gly Val Ile Thr Met Leu
 195 200 205

Ser Ser Ile Ser Ile Val Ile Ser Tyr Ala Leu Ile Leu Ser Asn Ile
 210 215 220

Leu Cys Ile Pro Ser Ala Glu Gly Arg Ser Lys Ala Phe Ser Thr Trp
 225 230 235 240

Gly Ser His Ile Ile Ala Val Ala Leu Phe Phe Gly Ser Gly Thr Phe
 245 250 255

Thr Tyr Leu Thr Thr Ser Phe Pro Gly Ser Met Asn His Gly Arg Phe
 260 265 270

Ala Ser Val Phe Tyr Thr Asn Val Val Pro Met Leu Asn Pro Ser Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Asp Asp Lys Leu Ala Leu Gly Lys Thr Leu
 290 295 300

Lys Arg Val Leu Phe
 305

<210> 167
 <211> 969
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(966)
 <223>

<400> 167
 atg agc cct gag aac cag agc agc gtg tcc gag ttc ctc ctc ctg ggc 48
 Met Ser Pro Glu Asn Gln Ser Ser Val Ser Glu Phe Leu Leu Leu Gly
 1 5 10 15

ctc ccc atc cgg cca gag cag cag gcc gtg ttc ttc gcc ctg ttc ctg 96
 Leu Pro Ile Arg Pro Glu Gln Gln Ala Val Phe Phe Ala Leu Phe Leu
 20 25 30

ggc atg tac ctg acc acg gtg ctg ggg aac ctg ctc atc atg ctg ctc 144

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Gly Met Tyr Leu Thr Thr Val Leu Gly Asn Leu Leu Ile Met Leu Leu	
35 40 45	
atc cag cta gac tct cac ctt cac acc ccc atg tac ttc ttc ctt agc	192
Ile Gln Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser	
50 55 60	
cac ttg gcc ctc act gac atc tcc ttt tca tct gtc act gtc cct aag	240
His Leu Ala Leu Thr Asp Ile Ser Phe Ser Ser Val Thr Val Pro Lys	
65 70 75 80	
atg ctg atg aac atg cag act cag cac cta gcc gtc ttt tac aag gga	288
Met Leu Met Asn Met Gln Thr Gln His Leu Ala Val Phe Tyr Lys Gly	
85 90 95	
tgc att tca cag aca tat ttt ttc ata ttt ttt gct gac tta gac agt	336
Cys Ile Ser Gln Thr Tyr Phe Phe Ile Phe Phe Ala Asp Leu Asp Ser	
100 105 110	
ttc ctt atc act tca atg gca tat gac agg tat gtg gcc atc tgt cat	384
Phe Leu Ile Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His	
115 120 125	
cct cta cat tat gcc acc atc atg act cag agc cag tgt gtc atg ctg	432
Pro Leu His Tyr Ala Thr Ile Met Thr Gln Ser Gln Cys Val Met Leu	
130 135 140	
gtg gct ggg tcc tgg gtc atc gct tgt gcg tgt gct ctt ttg cat acc	480
Val Ala Gly Ser Trp Val Ile Ala Cys Ala Cys Ala Leu Leu His Thr	
145 150 155 160	
ctc ctc ctg gcc cag ctt tcc ttc tgt gct gac cac atc atc cct cac	528
Leu Leu Leu Ala Gln Leu Ser Phe Cys Ala Asp His Ile Ile Pro His	
165 170 175	
tac ttc tgt gac ctt ggt gcc ctg ctc aag ttg tcc tgc tca gac acc	576
Tyr Phe Cys Asp Leu Gly Ala Leu Leu Lys Leu Ser Cys Ser Asp Thr	
180 185 190	
tcc ctc aat cag tta gca atc ttt aca gca gca ttg aca gcc att atg	624
Ser Leu Asn Gln Leu Ala Ile Phe Thr Ala Ala Leu Thr Ala Ile Met	
195 200 205	
ctt cca ttc ctg tgc atc ctg gtt tct tat ggt cac att ggg gtc acc	672
Leu Pro Phe Leu Cys Ile Leu Val Ser Tyr Gly His Ile Gly Val Thr	
210 215 220	
atc ctc cag att ccc tct acc aag ggc ata tgc aaa gcc ttg tcc act	720
Ile Leu Gln Ile Pro Ser Thr Lys Gly Ile Cys Lys Ala Leu Ser Thr	
225 230 235 240	
tgt gga tcc cac ctc tca gtg gtg act atc tat tat cgg aca att att	768
Cys Gly Ser His Leu Ser Val Val Ile Tyr Tyr Arg Thr Ile Ile	
245 250 255	
ggt ctc tat ttt ctt ccc cca tcc agc aac acc aat gac aag aac ata	816
Gly Leu Tyr Phe Leu Pro Pro Ser Ser Asn Thr Asn Asp Lys Asn Ile	
260 265 270	
att gct tca gtg ata tac aca gca gtc act ccc atg ttg aac cca ttc	864
Ile Ala Ser Val Ile Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Phe	

275	280	285	
att tac agt ctg aga aat aaa gac att aag gga gcc cta aga aaa ctc			912
Ile Tyr Ser Leu Arg Asn Lys Asp Ile Lys Gly Ala Leu Arg Lys Leu			
290	295	300	
ttg agt agg tca ggc gca gtg gct cat gcc tgt aat ctc agc act ttg			960
Leu Ser Arg Ser Gly Ala Val Ala His Ala Cys Asn Leu Ser Thr Leu			
305	310	315	320
gga ggc tga			969
Gly Gly			

<210> 168
 <211> 322
 <212> PRT
 <213> Homo Sapiens

<400> 168

Met Ser Pro Glu Asn Gln Ser Ser Val Ser Glu Phe Leu Leu Leu Gly
1 5 10 15

Leu Pro Ile Arg Pro Glu Gln Gln Ala Val Phe Phe Ala Leu Phe Leu
20 25 30

Gly Met Tyr Leu Thr Thr Val Leu Gly Asn Leu Leu Ile Met Leu Leu
35 40 45

Ile Gln Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

His Leu Ala Leu Thr Asp Ile Ser Phe Ser Ser Val Thr Val Pro Lys
65 70 75 80

Met Leu Met Asn Met Gln Thr Gln His Leu Ala Val Phe Tyr Lys Gly
85 90 95

Cys Ile Ser Gln Thr Tyr Phe Phe Ile Phe Phe Ala Asp Leu Asp Ser
100 105 110

Phe Leu Ile Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu His Tyr Ala Thr Ile Met Thr Gln Ser Gln Cys Val Met Leu
130 135 140

Val Ala Gly Ser Trp Val Ile Ala Cys Ala Cys Ala Leu Leu His Thr
145 150 155 160

Leu Leu Leu Ala Gln Leu Ser Phe Cys Ala Asp His Ile Ile Pro His
 165 170 175

Tyr Phe Cys Asp Leu Gly Ala Leu Leu Lys Leu Ser Cys Ser Asp Thr
 180 185 190

Ser Leu Asn Gln Leu Ala Ile Phe Thr Ala Ala Leu Thr Ala Ile Met
 195 200 205

Leu Pro Phe Leu Cys Ile Leu Val Ser Tyr Gly His Ile Gly Val Thr
 210 215 220

Ile Leu Gln Ile Pro Ser Thr Lys Gly Ile Cys Lys Ala Leu Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Ser Val Val Thr Ile Tyr Tyr Arg Thr Ile Ile
 245 250 255

Gly Leu Tyr Phe Leu Pro Pro Ser Ser Asn Thr Asn Asp Lys Asn Ile
 260 265 270

Ile Ala Ser Val Ile Tyr Thr Ala Val Thr Pro Met Leu Asn Pro Phe
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Ile Lys Gly Ala Leu Arg Lys Leu
 290 295 300

Leu Ser Arg Ser Gly Ala Val Ala His Ala Cys Asn Leu Ser Thr Leu
 305 310 315 320

Gly Gly

<210> 169
 <211> 972
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (969)
 <223>

<400> 169
 atg tgg cag aag aat cag acc tct ctg gca gac ttc atc ctt gag ggg
 Met Trp Gln Lys Asn Gln Thr Ser Leu Ala Asp Phe Ile Leu Glu Gly
 1 5 10 15

48

ctc ttc gat gac tcc ctt acc cac ctt ttc ctt ttc tcc ttg acc atg	96
Leu Phe Asp Asp Ser Leu Thr His Leu Phe Leu Phe Ser Leu Thr Met	
20 25 30	
gtg gtc ttc ctt att gcg gtg agt ggc aac acc ctc acc att ctc ctc	144
Val Val Phe Leu Ile Ala Val Ser Gly Asn Thr Leu Thr Ile Leu Leu	
35 40 45	
atc tgc att gat ccc cag ctt cat aca cca atg tat ttc ctg ctc agc	192
Ile Cys Ile Asp Pro Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser	
50 55 60	
cag ctc tcc ctc atg gat ctg atg cat gtc tcc aca atc atc ctg aag	240
Gln Leu Ser Leu Met Asp Leu Met His Val Ser Thr Ile Ile Leu Lys	
65 70 75 80	
atg gct acc aac tac cta tct ggc aag aaa tct atc tcc ttt gtg ggc	288
Met Ala Thr Asn Tyr Leu Ser Gly Lys Lys Ser Ile Ser Phe Val Gly	
85 90 95	
tgt gca acc cag cac ttc ctc tat ttg tgt cta ggt ggt gct gaa tgt	336
Cys Ala Thr Gln His Phe Leu Tyr Leu Cys Leu Gly Gly Ala Glu Cys	
100 105 110	
ttt ctc tta gct gtc atg tcc tat gac cgc tat gtt gcc atc tgt cat	384
Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His	
115 120 125	
cca ctg cgc tat gct gtg ctc atg aac aag aag gtg gga ctg atg atg	432
Pro Leu Arg Tyr Ala Val Leu Met Asn Lys Lys Val Gly Leu Met Met	
130 135 140	
gct gtc atg tca tgg ttg ggg gca tcc gtg aac tcc cta att cac atg	480
Ala Val Met Ser Trp Leu Gly Ala Ser Val Asn Ser Leu Ile His Met	
145 150 155 160	
gcg atc ttg atg cac ttc cct ttc tgt ggg cct cgg aaa gtc tac cac	528
Ala Ile Leu Met His Phe Pro Phe Cys Gly Pro Arg Lys Val Tyr His	
165 170 175	
ttc tac tgt gag ttc cca gct gtt gtg aag ttg gta tgt ggc gac atc	576
Phe Tyr Cys Glu Phe Pro Ala Val Val Lys Leu Val Cys Gly Asp Ile	
180 185 190	
act gtg tat gag acc aca gtg tac atc agc agc att ctc ctc ctc ctc	624
Thr Val Tyr Glu Thr Thr Val Tyr Ile Ser Ser Ile Leu Leu Leu Leu	
195 200 205	
ccc atc ttc ctg att tct aca tcc tat gtc ttc atc ctt caa agt gtc	672
Pro Ile Phe Leu Ile Ser Thr Ser Tyr Val Phe Ile Leu Gln Ser Val	
210 215 220	
att cag atg cgc tca tct ggg agc aag aga aat gcc ttt gcc act tgt	720
Ile Gln Met Arg Ser Ser Gly Ser Lys Arg Asn Ala Phe Ala Thr Cys	
225 230 235 240	
ggc tcc cac ctc acg gtg gtt tct ctt tgg ttt ggt gcc tgc atc ttc	768
Gly Ser His Leu Thr Val Val Ser Leu Trp Phe Gly Ala Cys Ile Phe	
245 250 255	
tcc tac atg aga ccc agg tcc cag tgc act cta ttg cag aac aaa gtt	816

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Ser Tyr Met Arg Pro Arg Ser Gln Cys Thr Leu Leu Gln Asn Lys Val
 260 265 270

ggg tct gtg ttc tac agc atc att acg ccc aca ttg aat tct ctg att 864
 Gly Ser Val Phe Tyr Ser Ile Ile Thr Pro Thr Leu Asn Ser Leu Ile
 275 280 285

tat act ctc cgg aat aaa gat gta gct aag gct ctg aga aga gtg ctg 912
 Tyr Thr Leu Arg Asn Lys Asp Val Ala Lys Ala Leu Arg Arg Val Leu
 290 295 300

agg aga gat gtt atc acc cag tgc att caa cga ctg caa ttg tgg ttg 960
 Arg Arg Asp Val Ile Thr Gln Cys Ile Gln Arg Leu Gln Leu Trp Leu
 305 310 315 320

ccc cga gtg tag 972
 Pro Arg Val

<210> 170
 <211> 323
 <212> PRT
 <213> Homo Sapiens

<400> 170

Met Trp Gln Lys Asn Gln Thr Ser Leu Ala Asp Phe Ile Leu Glu Gly
 1 5 10 15

Leu Phe Asp Asp Ser Leu Thr His Leu Phe Leu Phe Ser Leu Thr Met
 20 25 30

Val Val Phe Leu Ile Ala Val Ser Gly Asn Thr Leu Thr Ile Leu Leu
 35 40 45

Ile Cys Ile Asp Pro Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60

Gln Leu Ser Leu Met Asp Leu Met His Val Ser Thr Ile Ile Leu Lys
 65 70 75 80

Met Ala Thr Asn Tyr Leu Ser Gly Lys Lys Ser Ile Ser Phe Val Gly
 85 90 95

Cys Ala Thr Gln His Phe Leu Tyr Leu Cys Leu Gly Gly Ala Glu Cys
 100 105 110

Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu Arg Tyr Ala Val Leu Met Asn Lys Lys Val Gly Leu Met Met
 130 135 140

Ala Val Met Ser Trp Leu Gly Ala Ser Val Asn Ser Leu Ile His Met
145 150 155 160

Ala Ile Leu Met His Phe Pro Phe Cys Gly Pro Arg Lys Val Tyr His
165 170 175

Phe Tyr Cys Glu Phe Pro Ala Val Val Lys Leu Val Cys Gly Asp Ile
180 185 190

Thr Val Tyr Glu Thr Thr Val Tyr Ile Ser Ser Ile Leu Leu Leu Leu
195 200 205

Pro Ile Phe Leu Ile Ser Thr Ser Tyr Val Phe Ile Leu Gln Ser Val
210 215 220

Ile Gln Met Arg Ser Ser Gly Ser Lys Arg Asn Ala Phe Ala Thr Cys
225 230 235 240

Gly Ser His Leu Thr Val Val Ser Leu Trp Phe Gly Ala Cys Ile Phe
245 250 255

Ser Tyr Met Arg Pro Arg Ser Gln Cys Thr Leu Leu Gln Asn Lys Val
260 265 270

Gly Ser Val Phe Tyr Ser Ile Ile Thr Pro Thr Leu Asn Ser Leu Ile
275 280 285

Tyr Thr Leu Arg Asn Lys Asp Val Ala Lys Ala Leu Arg Arg Val Leu
290 295 300

Arg Arg Asp Val Ile Thr Gln Cys Ile Gln Arg Leu Gln Leu Trp Leu
305 310 315 320

Pro Arg Val

<210> 171
<211> 939
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1) .. (936)
<223>

<400> 171
 atg gaa gtg gga aat tgc acc atc ctg act gaa ttc atc ttg ttg ggt 48
 Met Glu Val Gly Asn Cys Thr Ile Leu Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15
 ttc tca gca gat tcc cag tgg cag ccg att cta ttt gga gtg ttt ctg 96
 Phe Ser Ala Asp Ser Gln Trp Gln Pro Ile Leu Phe Gly Val Phe Leu
 20 25 30
 atg ctc tat ttg ata acc ttg tca gga aac atg acc ttg gtt atc tta 144
 Met Leu Tyr Leu Ile Thr Leu Ser Gly Asn Met Thr Leu Val Ile Leu
 35 40 45
 atc cga act gat tcc cac ttg cat aca cct atg tac ttt ttc att ggc 192
 Ile Arg Thr Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Ile Gly
 50 55 60
 aat ctg tct ttt ttg gat ttc tgg tat acc tct gtg tat acc ccc aaa 240
 Asn Leu Ser Phe Leu Asp Phe Trp Tyr Thr Ser Val Tyr Thr Pro Lys
 65 70 75 80
 atc ctg gcc agt tgt gtc tca gaa gat aag cgc att tcc ttg gct gga 288
 Ile Leu Ala Ser Cys Val Ser Glu Asp Lys Arg Ile Ser Leu Ala Gly
 85 90 95
 tgt ggg gct cag ctg ttt ttt tcc tgt gtt gta gcc tac act gaa tgc 336
 Cys Gly Ala Gln Leu Phe Phe Ser Cys Val Val Ala Tyr Thr Glu Cys
 100 105 110
 tat ctc ctg gca gcc atg gca tat gac cgc cat gca gca att tgt aac 384
 Tyr Leu Leu Ala Ala Met Ala Tyr Asp Arg His Ala Ala Ile Cys Asn
 115 120 125
 cca ttg ctt tat tca ggt acc atg tcc acc gcc ctc tgt act ggg ctt 432
 Pro Leu Leu Tyr Ser Gly Thr Met Ser Thr Ala Leu Cys Thr Gly Leu
 130 135 140
 gtt gct ggc tcc tac ata gga gga ttt ttg aat gcc ata gcc cat act 480
 Val Ala Gly Ser Tyr Ile Gly Gly Phe Leu Asn Ala Ile Ala His Thr
 145 150 155 160
 gcc aat aca ttc cgc ctg cat ttt tgt ggt aaa aat atc att gac cac 528
 Ala Asn Thr Phe Arg Leu His Phe Cys Gly Lys Asn Ile Ile Asp His
 165 170 175
 ttt ttc tgt gat gca cca cca ttg gta aaa atg tcc tgt aca aac acc 576
 Phe Phe Cys Asp Ala Pro Pro Leu Val Lys Met Ser Cys Thr Asn Thr
 180 185 190
 agg gtc tac gaa aaa gtc ctg ctt ggt gtg gtg ggc ttc aca gta ctc 624
 Arg Val Tyr Glu Lys Val Leu Leu Gly Val Val Gly Phe Thr Val Leu
 195 200 205
 tcc agc att ctt gct atc ctg att tcc tat gtc aac atc ctc ctg gct 672
 Ser Ser Ile Leu Ala Ile Leu Ile Ser Tyr Val Asn Ile Leu Leu Ala
 210 215 220
 atc ctg aga atc cac tca gct tca gga aga cac aag gca ttc tcc acc 720
 Ile Leu Arg Ile His Ser Ala Ser Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240

tgt gct tcc cac ctc atc tca gtc atg ctc ttc tat gga tca ttg ttg 768
 Cys Ala Ser His Leu Ile Ser Val Met Leu Phe Tyr Gly Ser Leu Leu
 245 250 255

ttt atg tat tca agg cct agt tcc acc tac tcc cta gag agg gac aaa 816
 Phe Met Tyr Ser Arg Pro Ser Ser Thr Tyr Ser Leu Glu Arg Asp Lys
 260 265 270

gta gct gct ctg ttc tac acc gtg atc aac cca ctg ctc aac cct ctc 864
 Val Ala Ala Leu Phe Tyr Thr Val Ile Asn Pro Leu Leu Asn Pro Leu
 275 280 285

atc tat agc ctg aga aac aaa gat atc aaa gag gcc ttc agg aaa gca 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Ile Lys Glu Ala Phe Arg Lys Ala
 290 295 300

aca cag act ata caa cca caa aca tga 939
 Thr Gln Thr Ile Gln Pro Gln Thr
 305 310

<210> 172

<211> 312

<212> PRT

<213> Homo Sapiens

<400> 172

Met Glu Val Gly Asn Cys Thr Ile Leu Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15

Phe Ser Ala Asp Ser Gln Trp Gln Pro Ile Leu Phe Gly Val Phe Leu
 20 25 30

Met Leu Tyr Leu Ile Thr Leu Ser Gly Asn Met Thr Leu Val Ile Leu
 35 40 45

Ile Arg Thr Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Ile Gly
 50 55 60

Asn Leu Ser Phe Leu Asp Phe Trp Tyr Thr Ser Val Tyr Thr Pro Lys
 65 70 75 80

Ile Leu Ala Ser Cys Val Ser Glu Asp Lys Arg Ile Ser Leu Ala Gly
 85 90 95

Cys Gly Ala Gln Leu Phe Phe Ser Cys Val Val Ala Tyr Thr Glu Cys
 100 105 110

Tyr Leu Leu Ala Ala Met Ala Tyr Asp Arg His Ala Ala Ile Cys Asn
 115 120 125

Pro Leu Leu Tyr Ser Gly Thr Met Ser Thr Ala Leu Cys Thr Gly Leu

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130 135 140
 Val Ala Gly Ser Tyr Ile Gly Gly Phe Leu Asn Ala Ile Ala His Thr
 145 150 155 160
 Ala Asn Thr Phe Arg Leu His Phe Cys Gly Lys Asn Ile Ile Asp His
 165 170 175
 Phe Phe Cys Asp Ala Pro Pro Leu Val Lys Met Ser Cys Thr Asn Thr
 180 185 190
 Arg Val Tyr Glu Lys Val Leu Leu Gly Val Val Gly Phe Thr Val Leu
 195 200 205
 Ser Ser Ile Leu Ala Ile Leu Ile Ser Tyr Val Asn Ile Leu Leu Ala
 210 215 220
 Ile Leu Arg Ile His Ser Ala Ser Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Ile Ser Val Met Leu Phe Tyr Gly Ser Leu Leu
 245 250 255
 Phe Met Tyr Ser Arg Pro Ser Ser Thr Tyr Ser Leu Glu Arg Asp Lys
 260 265 270
 Val Ala Ala Leu Phe Tyr Thr Val Ile Asn Pro Leu Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Ile Lys Glu Ala Phe Arg Lys Ala
 290 295 300
 Thr Gln Thr Ile Gln Pro Gln Thr
 305 310
 <210> 173
 <211> 969
 <212> DNA
 <213> Homo Sapiens
 <220>
 <221> CDS
 <222> (1)..(966)
 <223>
 <400> 173
 atg aat tcc ctg aag cac ggg aat cac acc gct ctg acg ggg ttc atc
 Met Asn Ser Leu Lys His Gly Asn His Thr Ala Leu Thr Gly Phe Ile

1	5	10	15	
cta ttg ggc tta aca gat gat cca atc ctt cga gtc atc ctc ttc atg				96
Leu Leu Gly Leu Thr Asp Asp Pro Ile Leu Arg Val Ile Leu Phe Met	20	25	30	
atc atc cta tct ggt aat ctc agc ata att att ctt atc aga att tct				144
Ile Ile Leu Ser Gly Asn Leu Ser Ile Ile Ile Leu Ile Arg Ile Ser	35	40	45	
tct cag ctc cat cat cct atg tat ttc ttt ctg agc cac ttg gct ttt				192
Ser Gln Leu His His Pro Met Tyr Phe Phe Leu Ser His Leu Ala Phe	50	55	60	
gct gac atg gcc tat tca tct tct gtc aca ccc aac atg ctt gta aac				240
Ala Asp Met Ala Tyr Ser Ser Ser Val Thr Pro Asn Met Leu Val Asn	65	70	75	80
ttc ctg gtg gag aga aat aca gtc tcc tac ctt gga tgt gcc atc cag				288
Phe Leu Val Glu Arg Asn Thr Val Ser Tyr Leu Gly Cys Ala Ile Gln	85	90	95	
ctt ggt tca gcg gct ttc ttt gca aca gtc gaa tgc gtc ctt ctg gct				336
Leu Gly Ser Ala Ala Phe Phe Ala Thr Val Glu Cys Val Leu Leu Ala	100	105	110	
gcc atg gcc tat gac cgc ttt gtg gca att tgc agt cca ctg ctt tat				384
Ala Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Ser Pro Leu Leu Tyr	115	120	125	
tca acc aaa atg tcc aca caa gtc agt gtc cag cta ctc tta gta gtt				432
Ser Thr Lys Met Ser Thr Gln Val Ser Val Gln Leu Leu Leu Val Val	130	135	140	
tac ata gct ggt ttt ctc att gct gtc tcc tat act act tcc ttc tat				480
Tyr Ile Ala Gly Phe Leu Ile Ala Val Ser Tyr Thr Thr Ser Phe Tyr	145	150	155	160
ttt tta ctc ttc tgt gga cca aat caa gtc aat cat ttt ttc tgt gat				528
Phe Leu Leu Phe Cys Gly Pro Asn Gln Val Asn His Phe Phe Cys Asp	165	170	175	
ttc gct ccc tta ctt gaa ctc tcc tgt tct gat atc agt gtc tcc aca				576
Phe Ala Pro Leu Leu Glu Leu Ser Cys Ser Asp Ile Ser Val Ser Thr	180	185	190	
gtt gtt ctc tca ttt tct tct gga tcc atc att gtg gtc act gtg tgt				624
Val Val Leu Ser Phe Ser Ser Gly Ser Ile Ile Val Val Thr Val Cys	195	200	205	
gtc ata gcc gtc tgc tac atc tat atc ctc atc acc atc ctg aag atg				672
Val Ile Ala Val Cys Tyr Ile Tyr Ile Leu Ile Thr Ile Leu Lys Met	210	215	220	
cgc tcc act gag ggg cac cac aag gct ttc tcc acg tgc act tcc cac				720
Arg Ser Thr Glu Gly His His Lys Ala Phe Ser Thr Cys Thr Ser His	225	230	235	240
ctc act gtg gtt acc ctg ttc tat ggg acc att acc ttc att tat gtg				768
Leu Thr Val Val Thr Leu Phe Tyr Gly Thr Ile Thr Phe Ile Tyr Val	245	250	255	

atg ccc aat ttt agc tac tca act gac cag aac aag gtg gtg tct gtg 816
 Met Pro Asn Phe Ser Tyr Ser Thr Asp Gln Asn Lys Val Val Ser Val
 260 265 270
 ttg tac aca gtg gtg att ccc atg ttg aac ccc ctg atc tac agc ctc 864
 Leu Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu
 275 280 285
 agg aac aag gag att aag ggg gct ctg aag aga gag ctt gtt aga aaa 912
 Arg Asn Lys Glu Ile Lys Gly Ala Leu Lys Arg Glu Leu Val Arg Lys
 290 295 300
 ata ctt tct cat gat gct tgt tat ttt agt aga act tca aat aat gat 960
 Ile Leu Ser His Asp Ala Cys Tyr Phe Ser Arg Thr Ser Asn Asn Asp
 305 310 315 320
 att aca tag 969
 Ile Thr

<210> 174
 <211> 322
 <212> PRT
 <213> Homo Sapiens

<400> 174

Met Asn Ser Leu Lys His Gly Asn His Thr Ala Leu Thr Gly Phe Ile
 1 5 10 15

Leu Leu Gly Leu Thr Asp Asp Pro Ile Leu Arg Val Ile Leu Phe Met
 20 25 30

Ile Ile Leu Ser Gly Asn Leu Ser Ile Ile Ile Leu Ile Arg Ile Ser
 35 40 45

Ser Gln Leu His His Pro Met Tyr Phe Phe Leu Ser His Leu Ala Phe
 50 55 60

Ala Asp Met Ala Tyr Ser Ser Ser Val Thr Pro Asn Met Leu Val Asn
 65 70 75 80

Phe Leu Val Glu Arg Asn Thr Val Ser Tyr Leu Gly Cys Ala Ile Gln
 85 90 95

Leu Gly Ser Ala Ala Phe Phe Ala Thr Val Glu Cys Val Leu Leu Ala
 100 105 110

Ala Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Ser Pro Leu Leu Tyr
 115 120 125

Ser Thr Lys Met Ser Thr Gln Val Ser Val Gln Leu Leu Leu Val Val
 130 135 140

Tyr Ile Ala Gly Phe Leu Ile Ala Val Ser Tyr Thr Thr Ser Phe Tyr
 145 150 155 160

Phe Leu Leu Phe Cys Gly Pro Asn Gln Val Asn His Phe Phe Cys Asp
 165 170 175

Phe Ala Pro Leu Leu Glu Leu Ser Cys Ser Asp Ile Ser Val Ser Thr
 180 185 190

Val Val Leu Ser Phe Ser Ser Gly Ser Ile Ile Val Val Thr Val Cys
 195 200 205

Val Ile Ala Val Cys Tyr Ile Tyr Ile Leu Ile Thr Ile Leu Lys Met
 210 215 220

Arg Ser Thr Glu Gly His His Lys Ala Phe Ser Thr Cys Thr Ser His
 225 230 235 240

Leu Thr Val Val Thr Leu Phe Tyr Gly Thr Ile Thr Phe Ile Tyr Val
 245 250 255

Met Pro Asn Phe Ser Tyr Ser Thr Asp Gln Asn Lys Val Val Ser Val
 260 265 270

Leu Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu
 275 280 285

Arg Asn Lys Glu Ile Lys Gly Ala Leu Lys Arg Glu Leu Val Arg Lys
 290 295 300

Ile Leu Ser His Asp Ala Cys Tyr Phe Ser Arg Thr Ser Asn Asn Asp
 305 310 315 320

Ile Thr

<210> 175
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

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<400> 175
 atg ggg act gga aat gac acc act gtg gta gag ttt act ctt ttg ggg 48
 Met Gly Thr Gly Asn Asp Thr Thr Val Val Glu Phe Thr Leu Leu Gly
 1 5 10 15
 tta tct gag gat act aca gtt tgt gct att tta ttt ctt gtg ttt cta 96
 Leu Ser Glu Asp Thr Thr Val Cys Ala Ile Leu Phe Leu Val Phe Leu
 20 25 30
 gga att tat gtt gtc acc tta atg ggt aat atc agc ata att gta ttg 144
 Gly Ile Tyr Val Val Thr Leu Met Gly Asn Ile Ser Ile Ile Val Leu
 35 40 45
 atc aga aga agt cat cat ctt cat aca ccc atg tac att ttc ctc tgc 192
 Ile Arg Arg Ser His His Leu His Thr Pro Met Tyr Ile Phe Leu Cys
 50 55 60
 cat ttg gcc ttt gta gac att ggg tac tcc tca tca gtc aca cct gtc 240
 His Leu Ala Phe Val Asp Ile Gly Tyr Ser Ser Ser Val Thr Pro Val
 65 70 75 80
 atg ctc atg agc ttc cta agg aaa gaa acc tct ctc cct gtt gct ggt 288
 Met Leu Met Ser Phe Leu Arg Lys Glu Thr Ser Leu Pro Val Ala Gly
 85 90 95
 tgt gtg gcc cag ctc tgt tct gta gtg acg ttt ggt acg gcc gag tgc 336
 Cys Val Ala Gln Leu Cys Ser Val Val Thr Phe Gly Thr Ala Glu Cys
 100 105 110
 ttc ctg ctg gct gcc atg gcc tat gat cgc tat gtg gcc atc tgc tca 384
 Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser
 115 120 125
 ccc ctg ctc tac tct acc tgc atg tcc cct gga gtc tgc atc atc tta 432
 Pro Leu Leu Tyr Ser Thr Cys Met Ser Pro Gly Val Cys Ile Ile Leu
 130 135 140
 gtg ggc atg tcc tac ctg ggt gga tgt gtg aat gct tgc aca ttc att 480
 Val Gly Met Ser Tyr Leu Gly Gly Cys Val Asn Ala Cys Thr Phe Ile
 145 150 155 160
 ggc tgc tta tta aga ctg tcc ttc tgt ggg cca aat aaa gtc aat cac 528
 Gly Cys Leu Leu Arg Leu Ser Phe Cys Gly Pro Asn Lys Val Asn His
 165 170 175
 ttt ttc tgt gac tat tca cca ctt ttg aag ctt gct tgt tcc cat gat 576
 Phe Phe Cys Asp Tyr Ser Pro Leu Leu Lys Leu Ala Cys Ser His Asp
 180 185 190
 ttt act ttt gaa ata att cca gct atc tct tgt gga tct atc att gtg 624
 Phe Thr Phe Glu Ile Ile Pro Ala Ile Ser Cys Gly Ser Ile Ile Val
 195 200 205
 gcc act gtg tgt gtc ata gcc ata tcc tac atc tat atc ctc atc acc 672
 Ala Thr Val Cys Val Ile Ala Ile Ser Tyr Ile Tyr Ile Leu Ile Thr
 210 215 220
 atc ctg aag atg cac tcc acc aag ggc cgc cac aag gct ttc tcc acg 720
 Ile Leu Lys Met His Ser Thr Lys Gly Arg His Lys Ala Phe Ser Thr

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<210> 176
<211> 311
<212> PRT
<213> Homo Sapiens
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<400> 176

Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser
115 120 125

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Pro Leu Leu Tyr Ser Thr Cys Met Ser Pro Gly Val Cys Ile Ile Leu
 130 135 140

Val Gly Met Ser Tyr Leu Gly Gly Cys Val Asn Ala Cys Thr Phe Ile
 145 150 155 160

Gly Cys Leu Leu Arg Leu Ser Phe Cys Gly Pro Asn Lys Val Asn His
 165 170 175

Phe Phe Cys Asp Tyr Ser Pro Leu Leu Lys Leu Ala Cys Ser His Asp
 180 185 190

Phe Thr Phe Glu Ile Ile Pro Ala Ile Ser Cys Gly Ser Ile Ile Val
 195 200 205

Ala Thr Val Cys Val Ile Ala Ile Ser Tyr Ile Tyr Ile Leu Ile Thr
 210 215 220

Ile Leu Lys Met His Ser Thr Lys Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240

Cys Thr Ser His Leu Ser Ala Val Thr Val Leu Tyr Gly Thr Ile Thr
 245 250 255

Phe Ile Tyr Val Met Pro Lys Ser Ser Tyr Ser Thr Asp Gln Asn Lys
 260 265 270

Val Val Ser Val Leu Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Gly Ala Leu Lys Arg Glu
 290 295 300

Leu Arg Ile Lys Ile Phe Ser
 305 310

<210> 177
 <211> 1032
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (1029)
 <223>

<400> 177

atg gct ctt tat ttt tca ctc ata ctc cat ggt atg agt gat ctt ttc	48
Met Ala Leu Tyr Phe Ser Leu Ile Leu His Gly Met Ser Asp Leu Phe	
1 5 10 15	
ttt ctc tct aca ggt cat cca aga gcg agc tgt agg atg gag gcc atg	96
Phe Leu Ser Thr Gly His Pro Arg Ala Ser Cys Arg Met Glu Ala Met	
20 25 30	
aaa cta tta aat caa tct caa gtg tca gaa ttc att ttg ctg gga ctg	144
Lys Leu Leu Asn Gln Ser Gln Val Ser Glu Phe Ile Leu Leu Gly Leu	
35 40 45	
acc agc tcc cag gat gta gag ttt ctt ctc ttt gcc ctc ttc tcg gtt	192
Thr Ser Ser Gln Asp Val Glu Phe Leu Leu Phe Ala Leu Phe Ser Val	
50 55 60	
atc tat gtg gtc aca gtt ttg ggt aac ctt ctt att ata gtc aca gtg	240
Ile Tyr Val Val Thr Val Leu Gly Asn Leu Leu Ile Ile Val Thr Val	
65 70 75 80	
ttt aac acc cct aac ctg aat act ccc atg tat ttt ctc ctt ggt aat	288
Phe Asn Thr Pro Asn Leu Asn Thr Pro Met Tyr Phe Leu Leu Gly Asn	
85 90 95	
ctc tct ttt gta gat atg acc ctt gct tct ttt gcc acc cct aag gtg	336
Leu Ser Phe Val Asp Met Thr Leu Ala Ser Phe Ala Thr Pro Lys Val	
100 105 110	
att ctg aac ttg tta aaa aag cag aag gta att tct ttt gct ggg tgc	384
Ile Leu Asn Leu Leu Lys Lys Gln Lys Val Ile Ser Phe Ala Gly Cys	
115 120 125	
ttc act cag ata ttt ctc ctt cac tta ctg ggt ggg gtt gaa atg gta	432
Phe Thr Gln Ile Phe Leu Leu His Leu Leu Gly Gly Val Glu Met Val	
130 135 140	
ctg ttg gtc tcc atg gct ttt gac aga tat gtg gcc att tgt aag ccc	480
Leu Leu Val Ser Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys Pro	
145 150 155 160	
cta cac tac atg acc atc atg aac aag aag gta tgt gtt ttg ctt gta	528
Leu His Tyr Met Thr Ile Met Asn Lys Lys Val Cys Val Leu Leu Val	
165 170 175	
gtg acc tca tgg ctc ttg ggt ctc ctt cac tca ggg ttt cag ata cca	576
Val Thr Ser Trp Leu Leu Gly Leu Leu His Ser Gly Phe Gln Ile Pro	
180 185 190	
ttt gct gtg aac ttg ccc ttt tgt ggt ccc aat gtg gta gac agc att	624
Phe Ala Val Asn Leu Pro Phe Cys Gly Pro Asn Val Val Asp Ser Ile	
195 200 205	
ttt tgt gac ctc cct ttg gtt act aag ctt gcc tgt ata gac ata tat	672
Phe Cys Asp Leu Pro Leu Val Thr Lys Leu Ala Cys Ile Asp Ile Tyr	
210 215 220	
ttt gta cag gta gtc att gtt gcc aac agt ggc ata atc tcc ctg agc	720
Phe Val Gln Val Val Ile Val Ala Asn Ser Gly Ile Ile Ser Leu Ser	
225 230 235 240	
tgt ttc att att ttg ctt atc tcc tac agt ctg atc ctc ata acc att	768

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Cys Phe Ile Ile Leu Leu Ile Ser Tyr Ser Leu Ile Leu Ile Thr Ile
 245 250 255
 aag aac cac tct cct act ggg caa tct aaa gcc cgt tcc act ttg act 816
 Lys Asn His Ser Pro Thr Gly Gln Ser Lys Ala Arg Ser Thr Leu Thr
 260 265 270
 gct cac atc aca gtg gtg att ctc ttc ttt ggc cca tgc atc ttt atc 864
 Ala His Ile Thr Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe Ile
 275 280 285
 tac att tgg ccc ttc ggc aac cac tct gta gat aag ttc ctt gct gtg 912
 Tyr Ile Trp Pro Phe Gly Asn His Ser Val Asp Lys Phe Leu Ala Val
 290 295 300
 ttt tat acc atc atc act cct atc ttg aat cca att atc tat act ctg 960
 Phe Tyr Thr Ile Ile Thr Pro Ile Leu Asn Pro Ile Ile Tyr Thr Leu
 305 310 315 320
 aga aac aaa gaa atg aag ata tcc atg aaa aaa ctc tgg aga gct ttt 1008
 Arg Asn Lys Glu Met Lys Ile Ser Met Lys Lys Leu Trp Arg Ala Phe
 325 330 335
 gtg aat tct aga gaa gat act tag 1032
 Val Asn Ser Arg Glu Asp Thr
 340

<210> 178
 <211> 343
 <212> PRT
 <213> Homo Sapiens

<400> 178

Met Ala Leu Tyr Phe Ser Leu Ile Leu His Gly Met Ser Asp Leu Phe
 1 5 10 15

Phe Leu Ser Thr Gly His Pro Arg Ala Ser Cys Arg Met Glu Ala Met
 20 25 30

Lys Leu Leu Asn Gln Ser Gln Val Ser Glu Phe Ile Leu Leu Gly Leu
 35 40 45

Thr Ser Ser Gln Asp Val Glu Phe Leu Leu Phe Ala Leu Phe Ser Val
 50 55 60

Ile Tyr Val Val Thr Val Leu Gly Asn Leu Leu Ile Ile Val Thr Val
 65 70 75 80

Phe Asn Thr Pro Asn Leu Asn Thr Pro Met Tyr Phe Leu Leu Gly Asn
 85 90 95

Leu Ser Phe Val Asp Met Thr Leu Ala Ser Phe Ala Thr Pro Lys Val
 100 105 110

Ile Leu Asn Leu Leu Lys Lys Gln Lys Val Ile Ser Phe Ala Gly Cys
 115 120 125

Phe Thr Gln Ile Phe Leu Leu His Leu Leu Gly Gly Val Glu Met Val
 130 135 140

Leu Leu Val Ser Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys Pro
 145 150 155 160

Leu His Tyr Met Thr Ile Met Asn Lys Lys Val Cys Val Leu Leu Val
 165 170 175

Val Thr Ser Trp Leu Leu Gly Leu Leu His Ser Gly Phe Gln Ile Pro
 180 185 190

Phe Ala Val Asn Leu Pro Phe Cys Gly Pro Asn Val Val Asp Ser Ile
 195 200 205

Phe Cys Asp Leu Pro Leu Val Thr Lys Leu Ala Cys Ile Asp Ile Tyr
 210 215 220

Phe Val Gln Val Val Ile Val Ala Asn Ser Gly Ile Ile Ser Leu Ser
 225 230 235 240

Cys Phe Ile Ile Leu Leu Ile Ser Tyr Ser Leu Ile Leu Ile Thr Ile
 245 250 255

Lys Asn His Ser Pro Thr Gly Gln Ser Lys Ala Arg Ser Thr Leu Thr
 260 265 270

Ala His Ile Thr Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe Ile
 275 280 285

Tyr Ile Trp Pro Phe Gly Asn His Ser Val Asp Lys Phe Leu Ala Val
 290 295 300

Phe Tyr Thr Ile Ile Thr Pro Ile Leu Asn Pro Ile Ile Tyr Thr Leu
 305 310 315 320

Arg Asn Lys Glu Met Lys Ile Ser Met Lys Lys Leu Trp Arg Ala Phe
 325 330 335

Val Asn Ser Arg Glu Asp Thr
 340

<210> 179
 <211> 927
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(927)
 <223>

<400> 179
 atg gaa aca cag aac ctc aca gtg gtg aca gaa ttc att ctt ctt ggt 48
 Met Glu Thr Gln Asn Leu Thr Val Val Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15
 ctg acc cag tct caa gat gct caa ctt ctg gtc ttt gtg cta gtc tta 96
 Leu Thr Gln Ser Gln Asp Ala Gln Leu Leu Val Phe Val Leu Val Leu
 20 25 30
 att ttc tac ctt atc atc ctc cct gga aat ttc ctc atc att ttc acc 144
 Ile Phe Tyr Leu Ile Ile Leu Pro Gly Asn Phe Leu Ile Ile Phe Thr
 35 40 45
 ata aag tca gac cct ggg ctc aca gcc ccc ctc tat ttc ttt ctg ggc 192
 Ile Lys Ser Asp Pro Gly Leu Thr Ala Pro Leu Tyr Phe Phe Leu Gly
 50 55 60
 aac ttg gcc tta ctg gat gca tcc tac tcc ttc att gtg gtt ccc agg 240
 Asn Leu Ala Leu Leu Asp Ala Ser Tyr Ser Phe Ile Val Val Pro Arg
 65 70 75 80
 atg ttg gtg gac ttc ctc tct gag aag aag gta atc tcc tat aga agc 288
 Met Leu Val Asp Phe Leu Ser Glu Lys Lys Val Ile Ser Tyr Arg Ser
 85 90 95
 tgc atc act cag ctc ttt ttc ttg cat ttt ctt gga gcg gga gag atg 336
 Cys Ile Thr Gln Leu Phe Phe Leu His Phe Leu Gly Ala Gly Glu Met
 100 105 110
 ttc ctc ctc gtt gtg atg gcc ttt gac cgc tac atc gcc atc tgc cgg 384
 Phe Leu Leu Val Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Cys Arg
 115 120 125
 cct tta cac tat tca acc atc atg aac cct aga gcc tgc tat gca tta 432
 Pro Leu His Tyr Ser Thr Ile Met Asn Pro Arg Ala Cys Tyr Ala Leu
 130 135 140
 tgc ttg gtt ctg tgg ctt ggg ggc ttt atc cat tcc att gta caa gta 480
 Ser Leu Val Leu Trp Leu Gly Gly Phe Ile His Ser Ile Val Gln Val
 145 150 155 160
 gcc ctt atc ctg cac ttg cct ttc tgt ggc cca aac cag ctc gat aac 528
 Ala Leu Ile Leu His Leu Pro Phe Cys Gly Pro Asn Gln Leu Asp Asn
 165 170 175
 ttc ttc tgt gat gtt cca cag gtc atc aag ctg gcc tgc acc aat acc 576
 Phe Phe Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys Thr Asn Thr
 180 185 190

ttt gtg gtg gag ctt ctg atg gtc tcc aac agt ggc ctg ctc agc ctc 624
 Phe Val Val Glu Leu Leu Met Val Ser Asn Ser Gly Leu Leu Ser Leu
 195 200 205

 ctg tgc ttc ctg ggc ctt ctg gcc tcc tat gca gtc atc ctc tgt cgt 672
 Leu Cys Phe Leu Gly Leu Leu Ala Ser Tyr Ala Val Ile Leu Cys Arg
 210 215 220

 ata agg gag cac tcc tct gaa gga aag agc aag gct att tcc aca tgc 720
 Ile Arg Glu His Ser Ser Glu Gly Lys Ser Lys Ala Ile Ser Thr Cys
 225 230 235 240

 acc acc cat att atc att ata ttt ctc atg ttt gga cct gct att ttc 768
 Thr Thr His Ile Ile Ile Ile Phe Leu Met Phe Gly Pro Ala Ile Phe
 245 250 255

 atc tac act tgc ccc ttc cag gct ttc cca gct gac aag gta gtt tct 816
 Ile Tyr Thr Cys Pro Phe Gln Ala Phe Pro Ala Asp Lys Val Val Ser
 260 265 270

 ctt ttc cat act gtc atc ttt cct ttg atg aac cct gtt att tat acg 864
 Leu Phe His Thr Val Ile Phe Pro Leu Met Asn Pro Val Ile Tyr Thr
 275 280 285

 ctt cgc aac cag gag gtg aaa gct tcc atg agg aag ttg tta agt caa 912
 Leu Arg Asn Gln Glu Val Lys Ala Ser Met Arg Lys Leu Leu Ser Gln
 290 295 300

 cat atg ttt tgc tga 927
 His Met Phe Cys
 305

<210> 180
 <211> 308
 <212> PRT
 <213> Homo Sapiens

<400> 180

Met Glu Thr Gln Asn Leu Thr Val Val Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15

Leu Thr Gln Ser Gln Asp Ala Gln Leu Leu Val Phe Val Leu Val Leu
 20 25 30

Ile Phe Tyr Leu Ile Ile Leu Pro Gly Asn Phe Leu Ile Ile Phe Thr
 35 40 45

Ile Lys Ser Asp Pro Gly Leu Thr Ala Pro Leu Tyr Phe Phe Leu Gly
 50 55 60

Asn Leu Ala Leu Leu Asp Ala Ser Tyr Ser Phe Ile Val Val Pro Arg
 65 70 75 80

Met Leu Val Asp Phe Leu Ser Glu Lys Lys Val Ile Ser Tyr Arg Ser

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85 90 95
 Cys Ile Thr Gln Leu Phe Phe Leu His Phe Leu Gly Ala Gly Glu Met
 100 105 110
 Phe Leu Leu Val Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Cys Arg
 115 120 125
 Pro Leu His Tyr Ser Thr Ile Met Asn Pro Arg Ala Cys Tyr Ala Leu
 130 135 140
 Ser Leu Val Leu Trp Leu Gly Gly Phe Ile His Ser Ile Val Gln Val
 145 150 155 160
 Ala Leu Ile Leu His Leu Pro Phe Cys Gly Pro Asn Gln Leu Asp Asn
 165 170 175
 Phe Phe Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys Thr Asn Thr
 180 185 190
 Phe Val Val Glu Leu Leu Met Val Ser Asn Ser Gly Leu Leu Ser Leu
 195 200 205
 Leu Cys Phe Leu Gly Leu Leu Ala Ser Tyr Ala Val Ile Leu Cys Arg
 210 215 220
 Ile Arg Glu His Ser Ser Glu Gly Lys Ser Lys Ala Ile Ser Thr Cys
 225 230 235 240
 Thr Thr His Ile Ile Ile Ile Phe Leu Met Phe Gly Pro Ala Ile Phe
 245 250 255
 Ile Tyr Thr Cys Pro Phe Gln Ala Phe Pro Ala Asp Lys Val Val Ser
 260 265 270
 Leu Phe His Thr Val Ile Phe Pro Leu Met Asn Pro Val Ile Tyr Thr
 275 280 285
 Leu Arg Asn Gln Glu Val Lys Ala Ser Met Arg Lys Leu Leu Ser Gln
 290 295 300
 His Met Phe Cys
 305

<210> 181
 <211> 930

<212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(927)
 <223>

<400> 181
 atg gcc agt aca agt aat gtg act gag ttg att ttc act ggc ctt ttc 48
 Met Ala Ser Thr Ser Asn Val Thr Glu Leu Ile Phe Thr Gly Leu Phe
 1 5 10 15
 cag gat cca gct gtg cag agt gta tgc ttt gtg gtg ttt ctc ccc gtg 96
 Gln Asp Pro Ala Val Gln Ser Val Cys Phe Val Val Phe Leu Pro Val
 20 25 30
 tac ctt gcc acg gtg gtg ggc aat ggc ctc atc gtt ctg acg gtc agt 144
 Tyr Leu Ala Thr Val Val Gly Asn Gly Leu Ile Val Leu Thr Val Ser
 35 40 45
 atc agc aag agt ctg gat tct ccc atg tac ttc ttc ctt agc tgc ctg 192
 Ile Ser Lys Ser Leu Asp Ser Pro Met Tyr Phe Phe Leu Ser Cys Leu
 50 55 60
 tcc ttg gtg gag atc agt tat tcc tcc act atc gcc cct aaa ttc atc 240
 Ser Leu Val Glu Ile Ser Tyr Ser Ser Thr Ile Ala Pro Lys Phe Ile
 65 70 75 80
 ata gac tta ctt gcc aag att aaa acc atc tct ctg gaa ggc tgt ctg 288
 Ile Asp Leu Leu Ala Lys Ile Lys Thr Ile Ser Leu Glu Gly Cys Leu
 85 90 95
 act cag ata ttc ttc ttc cac ttc ttt ggg gtt gct gag atc ctt ttg 336
 Thr Gln Ile Phe Phe Phe His Phe Phe Gly Val Ala Glu Ile Leu Leu
 100 105 110
 att gtg gtg atg gcc tat gat tgc tac gtg gcc att tgc aag cct ctt 384
 Ile Val Val Met Ala Tyr Asp Cys Tyr Val Ala Ile Cys Lys Pro Leu
 115 120 125
 cat tat atg aac att atc agt cgt caa ctg tgt cac ctt ctg gtg gct 432
 His Tyr Met Asn Ile Ile Ser Arg Gln Leu Cys His Leu Leu Val Ala
 130 135 140
 ggt tcc tgg ctg ggg ggc ttt tgt cac tcc ata att cag att ctc gtt 480
 Gly Ser Trp Leu Gly Gly Phe Cys His Ser Ile Ile Gln Ile Leu Val
 145 150 155 160
 atc atc caa ttg ccc ttc tgt ggt ccc aat gtg att gac cac tat ttc 528
 Ile Ile Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asp His Tyr Phe
 165 170 175
 tgt gac ctc cag cct tta ttc aag ctt gcc tgc act gac acc ttc atg 576
 Cys Asp Leu Gln Pro Leu Phe Lys Leu Ala Cys Thr Asp Thr Phe Met
 180 185 190
 gag ggg gtt att gtg ttg gcc aac agt gga tta ttc tct gtc ttc tcc 624
 Glu Gly Val Ile Val Leu Ala Asn Ser Gly Leu Phe Ser Val Phe Ser
 195 200 205

ttc ctc atc ttg gtg tcc tct tat att gtc att ctg gtc aac ttg agg 672
 Phe Leu Ile Leu Val Ser Ser Tyr Ile Val Ile Leu Val Asn Leu Arg
 210 215 220
 aac cat tct gca gag ggg agg cac aaa gcc ctc tcc acc tgt gct tct 720
 Asn His Ser Ala Glu Gly Arg His Lys Ala Leu Ser Thr Cys Ala Ser
 225 230 235 240
 cac atc aca gtg gtc atc ttg ttt ttt gga cct gct atc ttc ctc tac 768
 His Ile Thr Val Val Ile Leu Phe Phe Gly Pro Ala Ile Phe Leu Tyr
 245 250 255
 atg cga cct tct tcc act ttc act gaa gat aaa ctt gtg gct gta ttc 816
 Met Arg Pro Ser Ser Thr Phe Thr Glu Asp Lys Leu Val Ala Val Phe
 260 265 270
 tac acg gtc atc acc ccc atg ctg aac ccc atc att tac aca ctc agg 864
 Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Ile Ile Tyr Thr Leu Arg
 275 280 285
 aat gca gag gtg aaa atc gcc ata aga aga ttg tgg agc aaa aag gag 912
 Asn Ala Glu Val Lys Ile Ala Ile Arg Arg Leu Trp Ser Lys Lys Glu
 290 295 300
 aat cca ggg agg gag tga 930
 Asn Pro Gly Arg Glu
 305

<210> 182
 <211> 309
 <212> PRT
 <213> Homo Sapiens

<400> 182

Met Ala Ser Thr Ser Asn Val Thr Glu Leu Ile Phe Thr Gly Leu Phe
 1 5 10 15

Gln Asp Pro Ala Val Gln Ser Val Cys Phe Val Val Phe Leu Pro Val
 20 25 30

Tyr Leu Ala Thr Val Val Gly Asn Gly Leu Ile Val Leu Thr Val Ser
 35 40 45

Ile Ser Lys Ser Leu Asp Ser Pro Met Tyr Phe Phe Leu Ser Cys Leu
 50 55 60

Ser Leu Val Glu Ile Ser Tyr Ser Ser Thr Ile Ala Pro Lys Phe Ile
 65 70 75 80

Ile Asp Leu Leu Ala Lys Ile Lys Thr Ile Ser Leu Glu Gly Cys Leu
 85 90 95

Thr Gln Ile Phe Phe Phe His Phe Phe Gly Val Ala Glu Ile Leu Leu
 100 105 110
 Ile Val Val Met Ala Tyr Asp Cys Tyr Val Ala Ile Cys Lys Pro Leu
 115 120 125
 His Tyr Met Asn Ile Ile Ser Arg Gln Leu Cys His Leu Leu Val Ala
 130 135 140
 Gly Ser Trp Leu Gly Gly Phe Cys His Ser Ile Ile Gln Ile Leu Val
 145 150 155 160
 Ile Ile Gln Leu Pro Phe Cys Gly Pro Asn Val Ile Asp His Tyr Phe
 165 170 175
 Cys Asp Leu Gln Pro Leu Phe Lys Leu Ala Cys Thr Asp Thr Phe Met
 180 185 190
 Glu Gly Val Ile Val Leu Ala Asn Ser Gly Leu Phe Ser Val Phe Ser
 195 200 205
 Phe Leu Ile Leu Val Ser Ser Tyr Ile Val Ile Leu Val Asn Leu Arg
 210 215 220
 Asn His Ser Ala Glu Gly Arg His Lys Ala Leu Ser Thr Cys Ala Ser
 225 230 235 240
 His Ile Thr Val Val Ile Leu Phe Phe Gly Pro Ala Ile Phe Leu Tyr
 245 250 255
 Met Arg Pro Ser Ser Thr Phe Thr Glu Asp Lys Leu Val Ala Val Phe
 260 265 270
 Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Ile Ile Tyr Thr Leu Arg
 275 280 285
 Asn Ala Glu Val Lys Ile Ala Ile Arg Arg Leu Trp Ser Lys Lys Glu
 290 295 300
 Asn Pro Gly Arg Glu
 305

<210> 183
 <211> 918
 <212> DNA
 <213> Homo Sapiens

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<220>

<221> CDS

<222> (1) .. (915)

<223>

<400> 183
 atg gtt gct aca aac aat gtg act gaa ata att ttc gtg gga ttt tcc 48
 Met Val Ala Thr Asn Asn Val Thr Glu Ile Ile Phe Val Gly Phe Ser 15
 1 5 10
 cag aat tgg agt gag cag agg gtc att tct gtg atg ttt ctc ctc atg 96
 Gln Asn Trp Ser Glu Gln Arg Val Ile Ser Val Met Phe Leu Leu Met 30
 20 25
 tac aca gct gtt gtg ctg ggc aat ggc ctc att gtg gtg acc atc ctg 144
 Tyr Thr Ala Val Val Leu Gly Asn Gly Leu Ile Val Val Thr Ile Leu 45
 35 40
 gcc agc aaa gtg ctc acc tcc ccc atg tat ttc ttt ctc agc tac tta 192
 Ala Ser Lys Val Leu Thr Ser Pro Met Tyr Phe Phe Leu Ser Tyr Leu 60
 50 55
 tcc ttt gtg gag atc tgc tac tgt tct gtc atg gcc ccc aag ctt atc 240
 Ser Phe Val Glu Ile Cys Tyr Cys Ser Val Met Ala Pro Lys Leu Ile 80
 65 70 75
 ttt gac tcc ttt atc aag agg aaa gtc att tct ctc aag ggc tgc ctc 288
 Phe Asp Ser Phe Ile Lys Arg Lys Val Ile Ser Leu Lys Gly Cys Leu 95
 85 90
 aca cag atg ttt tcc ctc cat ttc ttt ggt ggc act gag gcc ttt ctc 336
 Thr Gln Met Phe Ser Leu His Phe Phe Gly Gly Thr Glu Ala Phe Leu 110
 100 105
 ctg atg gtg atg gcc tat gac cgc tat gtg gcc atc tgc aag ccc ttg 384
 Leu Met Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu 125
 115 120
 cac tac atg gcc atc atg aac cag cga atg tgt ggt ctc ctc gtg agg 432
 His Tyr Met Ala Ile Met Asn Gln Arg Met Cys Gly Leu Leu Val Arg 140
 130 135
 ata gca tgg ggc ggg ggc ctg ctg cat tct gtt ggg caa acc ttc ctg 480
 Ile Ala Trp Gly Gly Gly Leu Leu His Ser Val Gly Gln Thr Phe Leu 160
 145 150 155
 att ttc cag ctc ccg ttc tgt ggc ccc aac atc atg gac cac tac ttc 528
 Ile Phe Gln Leu Pro Phe Cys Gly Pro Asn Ile Met Asp His Tyr Phe 175
 165 170
 tgt gat gtc cac cca gtg ctg gag ctg gcc tgc gca gac acc ttc ttc 576
 Cys Asp Val His Pro Val Leu Glu Leu Ala Cys Ala Asp Thr Phe Phe 190
 180 185
 att agc ctg ctg atc atc acc aat ggc ggc tcc atc tcc gta gtc agt 624
 Ile Ser Leu Leu Ile Ile Thr Asn Gly Gly Ser Ile Ser Val Val Ser 205
 195 200
 ttc ttc gtg ctg atg gct tcc tac ctg atc atc ctg cac ttc ctg aga 672
 Phe Phe Val Leu Met Ala Ser Tyr Leu Ile Ile Leu His Phe Leu Arg

210	215	220	
agc cac aac ttg gag ggg cag cac aag gcc ctc tcc acc tgt gcc tct			720
Ser His Asn Leu Glu Gly Gln His Lys Ala Leu Ser Thr Cys Ala Ser			
225	230	235	240
cat gtc aca gtt gtc gac ctg ttc ttc ata cct tgc tcc ttg gtc tat			768
His Val Thr Val Val Asp Leu Phe Phe Ile Pro Cys Ser Leu Val Tyr			
	245	250	255
att agg ccc tgt gtc acc ctc cct gca gac aag ata gtt gct gta ttt			816
Ile Arg Pro Cys Val Thr Leu Pro Ala Asp Lys Ile Val Ala Val Phe			
	260	265	270
tat aca gtg gtc aca cct ctc tta aac cct gtg att tac tcc ttc agg			864
Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Val Ile Tyr Ser Phe Arg			
	275	280	285
aat gct gaa gtg aaa aat gcc atg agg aga ttt att ggg gga aaa gta			912
Asn Ala Glu Val Lys Asn Ala Met Arg Arg Phe Ile Gly Gly Lys Val			
	290	295	300
att tga			918
Ile			
305			
<210>	184		
<211>	305		
<212>	PRT		
<213>	Homo Sapiens		
<400>	184		
Met Val Ala Thr Asn Asn Val Thr Glu Ile Ile Phe Val Gly Phe Ser			
1	5	10	15
Gln Asn Trp Ser Glu Gln Arg Val Ile Ser Val Met Phe Leu Leu Met			
	20	25	30
Tyr Thr Ala Val Val Leu Gly Asn Gly Leu Ile Val Val Thr Ile Leu			
	35	40	45
Ala Ser Lys Val Leu Thr Ser Pro Met Tyr Phe Phe Leu Ser Tyr Leu			
	50	55	60
Ser Phe Val Glu Ile Cys Tyr Cys Ser Val Met Ala Pro Lys Leu Ile			
65	70	75	80
Phe Asp Ser Phe Ile Lys Arg Lys Val Ile Ser Leu Lys Gly Cys Leu			
	85	90	95
Thr Gln Met Phe Ser Leu His Phe Phe Gly Gly Thr Glu Ala Phe Leu			
	100	105	110

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Leu Met Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
 115 120 125

His Tyr Met Ala Ile Met Asn Gln Arg Met Cys Gly Leu Leu Val Arg
 130 135 140

Ile Ala Trp Gly Gly Gly Leu Leu His Ser Val Gly Gln Thr Phe Leu
 145 150 155 160

Ile Phe Gln Leu Pro Phe Cys Gly Pro Asn Ile Met Asp His Tyr Phe
 165 170 175

Cys Asp Val His Pro Val Leu Glu Leu Ala Cys Ala Asp Thr Phe Phe
 180 185 190

Ile Ser Leu Leu Ile Ile Thr Asn Gly Gly Ser Ile Ser Val Val Ser
 195 200 205

Phe Phe Val Leu Met Ala Ser Tyr Leu Ile Ile Leu His Phe Leu Arg
 210 215 220

Ser His Asn Leu Glu Gly Gln His Lys Ala Leu Ser Thr Cys Ala Ser
 225 230 235 240

His Val Thr Val Val Asp Leu Phe Phe Ile Pro Cys Ser Leu Val Tyr
 245 250 255

Ile Arg Pro Cys Val Thr Leu Pro Ala Asp Lys Ile Val Ala Val Phe
 260 265 270

Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Val Ile Tyr Ser Phe Arg
 275 280 285

Asn Ala Glu Val Lys Asn Ala Met Arg Arg Phe Ile Gly Gly Lys Val
 290 295 300

Ile
 305

<210> 185
 <211> 912
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(909)

<223>

<400> 185

atg act gaa ttc att ttt ctg gta ctt tct ccc aac cag gag gtg cag	48
Met Thr Glu Phe Ile Phe Leu Val Leu Ser Pro Asn Gln Glu Val Gln	
1 5 10 15	
agg gtt tgc ttt gtg ata ttt ctg ttc ttg tac aca gca att gtg ctg	96
Arg Val Cys Phe Val Ile Phe Leu Phe Leu Tyr Thr Ala Ile Val Leu	
20 25 30	
ggg aat ttc ctc att gtg ctc act gtc atg acc agc aga agc ctt ggt	144
Gly Asn Phe Leu Ile Val Leu Thr Val Met Thr Ser Arg Ser Leu Gly	
35 40 45	
tcc ccc atg tac ttc ttc ctc agc tac ctc tcc ttc atg gag atc tgc	192
Ser Pro Met Tyr Phe Phe Leu Ser Tyr Leu Ser Phe Met Glu Ile Cys	
50 55 60	
tac tcc tcc gct aca gcc ccc aaa ctc atc tca gat ctg ctg gct gaa	240
Tyr Ser Ser Ala Thr Ala Pro Lys Leu Ile Ser Asp Leu Leu Ala Glu	
65 70 75 80	
agg aaa gtc ata tct tgg tgg ggc tgc atg gca cag ctt ttc ttc ttg	288
Arg Lys Val Ile Ser Trp Trp Gly Cys Met Ala Gln Leu Phe Phe Leu	
85 90 95	
cac ttc ttt ggt ggc act gag att ttc ctg ctc act gtg atg gcc tat	336
His Phe Phe Gly Gly Thr Glu Ile Phe Leu Leu Thr Val Met Ala Tyr	
100 105 110	
gac cac tat gtg gcc atc tgc aag ccc ctc agc tac acc acc atc atg	384
Asp His Tyr Val Ala Ile Cys Lys Pro Leu Ser Tyr Thr Thr Ile Met	
115 120 125	
aac tgg cag gtg tgt act gtc ctt gta gga ata gca tgg gtg gga ggc	432
Asn Trp Gln Val Cys Thr Val Leu Val Gly Ile Ala Trp Val Gly Gly	
130 135 140	
ttc atg cat tcc ttt gca caa atc ctt ctc atc ttc cac ctg ctc ttc	480
Phe Met His Ser Phe Ala Gln Ile Leu Leu Ile Phe His Leu Leu Phe	
145 150 155 160	
tgt ggc ccc aat gtg atc aat cac tat ttc tgt gac cta gtt ccc ctt	528
Cys Gly Pro Asn Val Ile Asn His Tyr Phe Cys Asp Leu Val Pro Leu	
165 170 175	
ctc aaa ctt gcc tgc tct gac acc ttc ctc att ggt ctg ctg att gtt	576
Leu Lys Leu Ala Cys Ser Asp Thr Phe Leu Ile Gly Leu Leu Ile Val	
180 185 190	
gcc aat gga ggc acc ctg tct gtg atc agt ttt ggg gtc ctc tta gca	624
Ala Asn Gly Gly Thr Leu Ser Val Ile Ser Phe Gly Val Leu Leu Ala	
195 200 205	
tcc tat atg gtc atc ttg ctc cat ctg aga acc tgg agc tct gaa ggg	672
Ser Tyr Met Val Ile Leu Leu His Leu Arg Thr Trp Ser Ser Glu Gly	
210 215 220	
tgg tgc aaa gcc ctc tcc acc tgt ggg tcc cat ttc gct gtg gtt atc	720

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Trp Cys Lys Ala Leu Ser Thr Cys Gly Ser His Phe Ala Val Val Ile
 225 230 235 240
 ttg ttc ttt ggg ccc tgc gtc ttc aac tct ctg agg cct tct acc act 768
 Leu Phe Phe Gly Pro Cys Val Phe Asn Ser Leu Arg Pro Ser Thr Thr
 245 250 255
 ctg ccc ata gac aag atg gtg gct gtg ttc tac aca gtg ata acc gcg 816
 Leu Pro Ile Asp Lys Met Val Ala Val Phe Tyr Thr Val Ile Thr Ala
 260 265 270
 atc ctg aac cct gtc atc tac tct ctg aga aat gct gaa atg agg aag 864
 Ile Leu Asn Pro Val Ile Tyr Ser Leu Arg Asn Ala Glu Met Arg Lys
 275 280 285
 gcc atg aag agg ctg tgg att agg aca ttg aga cta aat gag aaa tag 912
 Ala Met Lys Arg Leu Trp Ile Arg Thr Leu Arg Leu Asn Glu Lys
 290 295 300

<210> 186
 <211> 303
 <212> PRT
 <213> Homo Sapiens

<400> 186

Met Thr Glu Phe Ile Phe Leu Val Leu Ser Pro Asn Gln Glu Val Gln
 1 5 10 15

Arg Val Cys Phe Val Ile Phe Leu Phe Leu Tyr Thr Ala Ile Val Leu
 20 25 30

Gly Asn Phe Leu Ile Val Leu Thr Val Met Thr Ser Arg Ser Leu Gly
 35 40 45

Ser Pro Met Tyr Phe Phe Leu Ser Tyr Leu Ser Phe Met Glu Ile Cys
 50 55 60

Tyr Ser Ser Ala Thr Ala Pro Lys Leu Ile Ser Asp Leu Leu Ala Glu
 65 70 75 80

Arg Lys Val Ile Ser Trp Trp Gly Cys Met Ala Gln Leu Phe Phe Leu
 85 90 95

His Phe Phe Gly Gly Thr Glu Ile Phe Leu Leu Thr Val Met Ala Tyr
 100 105 110

Asp His Tyr Val Ala Ile Cys Lys Pro Leu Ser Tyr Thr Thr Ile Met
 115 120 125

Asn Trp Gln Val Cys Thr Val Leu Val Gly Ile Ala Trp Val Gly Gly
 130 135 140

Phe Met His Ser Phe Ala Gln Ile Leu Leu Ile Phe His Leu Leu Phe
145 150 155 160

Cys Gly Pro Asn Val Ile Asn His Tyr Phe Cys Asp Leu Val Pro Leu
165 170 175

Leu Lys Leu Ala Cys Ser Asp Thr Phe Leu Ile Gly Leu Leu Ile Val
180 185 190

Ala Asn Gly Gly Thr Leu Ser Val Ile Ser Phe Gly Val Leu Leu Ala
195 200 205

Ser Tyr Met Val Ile Leu Leu His Leu Arg Thr Trp Ser Ser Glu Gly
210 215 220

Trp Cys Lys Ala Leu Ser Thr Cys Gly Ser His Phe Ala Val Val Ile
225 230 235 240

Leu Phe Phe Gly Pro Cys Val Phe Asn Ser Leu Arg Pro Ser Thr Thr
245 250 255

Leu Pro Ile Asp Lys Met Val Ala Val Phe Tyr Thr Val Ile Thr Ala
260 265 270

Ile Leu Asn Pro Val Ile Tyr Ser Leu Arg Asn Ala Glu Met Arg Lys
275 280 285

Ala Met Lys Arg Leu Trp Ile Arg Thr Leu Arg Leu Asn Glu Lys
290 295 300

<210> 187
<211> 1044
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(1041)
<223>

<400> 187
atg ggt aac tgg act gca gcg gtg act gag ttt gtt ctg ctg ggg ttt 48
Met Gly Asn Trp Thr Ala Ala Val Thr Glu Phe Val Leu Leu Gly Phe
1 5 10 15

tcc ctg agc agg gag gtg gag ctg ctg ctc ctg gtg ctc ctg ctg ccc 96
Ser Leu Ser Arg Glu Val Glu Leu Leu Leu Leu Val Leu Leu Leu Pro
20 25 30

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acg ttc ctg ctg act ctt ctg ggg aac ctg ctc atc atc tcc act gtg 144
 Thr Phe Leu Leu Thr Leu Leu Gly Asn Leu Leu Ile Ile Ser Thr Val
 35 40 45

ctg tcc tgc tcc cgc ctc cac acc ccc atg tac ttc ttc ttg tgc aac 192
 Leu Ser Cys Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Cys Asn
 50 55 60

ctc tct atc ctg gac atc ctc ttc acc tca gtc atc tct cca aaa gtg 240
 Leu Ser Ile Leu Asp Ile Leu Phe Thr Ser Val Ile Ser Pro Lys Val
 65 70 75 80

ttg gcc aac tta gga tct agg gat aaa acc atc tcc ttt gcc gga tgt 288
 Leu Ala Asn Leu Gly Ser Arg Asp Lys Thr Ile Ser Phe Ala Gly Cys
 85 90 95

atc acc cag tgc tat ttc tac ttt ttc ttg ggc aca gtt gag ttc ctc 336
 Ile Thr Gln Cys Tyr Phe Tyr Phe Phe Leu Gly Thr Val Glu Phe Leu
 100 105 110

ctg ctg acg gtc atg tcc tat gac cgt tat gcc acc atc tgc tgc ccc 384
 Leu Leu Thr Val Met Ser Tyr Asp Arg Tyr Ala Thr Ile Cys Cys Pro
 115 120 125

ctg cgg tac acc acc atc atg aga cct tct gtc tgc att ggg acc gtt 432
 Leu Arg Tyr Thr Thr Ile Met Arg Pro Ser Val Cys Ile Gly Thr Val
 130 135 140

gta ttc tct tgg gtg gga ggc ttc ctg tct gtg ctc ttt cca acc atc 480
 Val Phe Ser Trp Val Gly Gly Phe Leu Ser Val Leu Phe Pro Thr Ile
 145 150 155 160

ctc atc tcc cag ctg ccc ttc tgt ggc tcc aat atc att aac cac ttc 528
 Leu Ile Ser Gln Leu Pro Phe Cys Gly Ser Asn Ile Ile Asn His Phe
 165 170 175

ttc tgt gac agt gga ccc ttg ctg gcc ctg gcc tgt gca gac acc act 576
 Phe Cys Asp Ser Gly Pro Leu Leu Ala Leu Ala Cys Ala Asp Thr Thr
 180 185 190

gcc atc gag ctg atg gat ttt atg ctt tct tcc atg gtc atc ctc tgc 624
 Ala Ile Glu Leu Met Asp Phe Met Leu Ser Ser Met Val Ile Leu Cys
 195 200 205

tgc ata gtc ctc gtg gcc tat tcc tat acg tac atc atc ttg acc ata 672
 Cys Ile Val Leu Val Ala Tyr Ser Tyr Thr Tyr Ile Ile Leu Thr Ile
 210 215 220

gtg cgc att cct tct gca agt gga agg aag gcc ttt aat acc tgt 720
 Val Arg Ile Pro Ser Ala Ser Gly Arg Lys Lys Ala Phe Asn Thr Cys
 225 230 235 240

gct tcc cac ctg acc ata gtc atc att cct agt ggc atc act gtg ttt 768
 Ala Ser His Leu Thr Ile Val Ile Ile Pro Ser Gly Ile Thr Val Phe
 245 250 255

atc tat gtg act ccc tcc cag aaa gaa tat ctg gag atc aac aag atc 816
 Ile Tyr Val Thr Pro Ser Gln Lys Glu Tyr Leu Glu Ile Asn Lys Ile
 260 265 270

cct ttg gtt ctg agc agt gtg gtg act cca ttc ctc aac ccc ttt ata 864
 Pro Leu Val Leu Ser Ser Val Val Thr Pro Phe Leu Asn Pro Phe Ile
 275 280 285

tat act ctg agg aat gac aca gtg cag gga gtc ctc agg gat gtg tgg 912
 Tyr Thr Leu Arg Asn Asp Thr Val Gln Gly Val Leu Arg Asp Val Trp
 290 295 300

gtc agg gtt cga gga gtt ttt gaa aag agg atg agg gca gtg ctg aga 960
 Val Arg Val Arg Gly Val Phe Glu Lys Arg Met Arg Ala Val Leu Arg
 305 310 315 320

agc aga tta tcc tcc aac aaa gac cac caa gga agg gct tgc tct tct 1008
 Ser Arg Leu Ser Ser Asn Lys Asp His Gln Gly Arg Ala Cys Ser Ser
 325 330 335

cca cca tgt gtc tat tct gta aag ctc cag tgt tag 1044
 Pro Pro Cys Val Tyr Ser Val Lys Leu Gln Cys
 340 345

<210> 188
 <211> 347
 <212> PRT
 <213> Homo Sapiens

<400> 188

Met Gly Asn Trp Thr Ala Ala Val Thr Glu Phe Val Leu Leu Gly Phe
 1 5 10 15

Ser Leu Ser Arg Glu Val Glu Leu Leu Leu Val Leu Leu Leu Pro
 20 25 30

Thr Phe Leu Leu Thr Leu Leu Gly Asn Leu Leu Ile Ile Ser Thr Val
 35 40 45

Leu Ser Cys Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Cys Asn
 50 55 60

Leu Ser Ile Leu Asp Ile Leu Phe Thr Ser Val Ile Ser Pro Lys Val
 65 70 75 80

Leu Ala Asn Leu Gly Ser Arg Asp Lys Thr Ile Ser Phe Ala Gly Cys
 85 90 95

Ile Thr Gln Cys Tyr Phe Tyr Phe Phe Leu Gly Thr Val Glu Phe Leu
 100 105 110

Leu Leu Thr Val Met Ser Tyr Asp Arg Tyr Ala Thr Ile Cys Cys Pro
 115 120 125

Leu Arg Tyr Thr Thr Ile Met Arg Pro Ser Val Cys Ile Gly Thr Val

$\langle 220 \rangle$

<221> CDS

<222> (1) .. (936)

<223>

<400> 189

atg gat gaa gcc aat cac tct gtg gtc tct gag ttt gtg ttc ctg gga	48
Met Asp Glu Ala Asn His Ser Val Val Ser Glu Phe Val Phe Leu Gly	
1 5 10 15	
ctc tct gac tcg cgg aag atc cag ctc ctc ctc ttc ctc ttt ttc tca	96
Leu Ser Asp Ser Arg Lys Ile Gln Leu Leu Leu Phe Leu Phe Phe Ser	
20 25 30	
gtg ttc tat gta tca agc ctg atg gga aat ctc ctc att gtg cta act	144
Val Phe Tyr Val Ser Ser Leu Met Gly Asn Leu Leu Ile Val Leu Thr	
35 40 45	
gtg acc tct gac cct cgt tta cag tcc ccc atg tac ttc ctg ctg gcc	192
Val Thr Ser Asp Pro Arg Leu Gln Ser Pro Met Tyr Phe Leu Leu Ala	
50 55 60	
aac ctt tcc atc atc aat ttg gta ttt tgt tcc tcc aca gct ccc aag	240
Asn Leu Ser Ile Ile Asn Leu Val Phe Cys Ser Ser Thr Ala Pro Lys	
65 70 75 80	
atg att tat gac ctt ttc agg aag cac aag acc atc tct ttt ggg ggc	288
Met Ile Tyr Asp Leu Phe Arg Lys His Lys Thr Ile Ser Phe Gly Gly	
85 90 95	
tgt gta gtt cag atc ttc ttt atc cat gca gtt ggg gga act gag atg	336
Cys Val Val Gln Ile Phe Phe Ile His Ala Val Gly Gly Thr Glu Met	
100 105 110	
gtg ctg ctc ata gcc atg gct ttt gac cga tat gtg gcc ata tgt aag	384
Val Leu Leu Ile Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys	
115 120 125	
cct ctc cac tac ctg acc atc atg aac cca caa agg tgc att ttg ttt	432
Pro Leu His Tyr Leu Thr Ile Met Asn Pro Gln Arg Cys Ile Leu Phe	
130 135 140	
tta gtc att tcc tgg att ata ggt att att cac tca gtg att cag ttg	480
Leu Val Ile Ser Trp Ile Ile Gly Ile Ile His Ser Val Ile Gln Leu	
145 150 155 160	
gct ttt gtt gta gac ctg ctg ttc tgt ggc cct aat gaa tta gat agt	528
Ala Phe Val Val Asp Leu Leu Phe Cys Gly Pro Asn Glu Leu Asp Ser	
165 170 175	
ttc ttt tgt gat ctt cct cga ttt atc aaa ctg gct tgc ata gag acc	576
Phe Phe Cys Asp Leu Pro Arg Phe Ile Lys Leu Ala Cys Ile Glu Thr	
180 185 190	
tac aca ttg gga ttc atg gtt act gcc aat agt gga ttt att tct ctg	624
Tyr Thr Leu Gly Phe Met Val Thr Ala Asn Ser Gly Phe Ile Ser Leu	
195 200 205	
gct tct ttt tta att ctc ata atc tct tac atc ttt att ttg gtg act	672
Ala Ser Phe Leu Ile Leu Ile Ile Ser Tyr Ile Phe Ile Leu Val Thr	
210 215 220	

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gtt cag aaa aaa tct tca ggt ggt ata ttc aag gct ttc tct atg ctg 720
 Val Gln Lys Lys Ser Ser Gly Gly Ile Phe Lys Ala Phe Ser Met Leu 240
 225 230 235
 tca gct cat gtc att gtg gtg gtt ttg gtc ttt ggg cca tta atc ttt 768
 Ser Ala His Val Ile Val Val Val Leu Val Phe Gly Pro Leu Ile Phe 255
 245 250
 ttc tat att ttt cca ttt ccc aca tca cat ctt gat aaa ttc ctt gcc 816
 Phe Tyr Ile Phe Pro Phe Pro Thr Ser His Leu Asp Lys Phe Leu Ala 270
 260 265
 atc ttt gat gca gtt atc act ccc gtt ttg aat cca gtc atc tat act 864
 Ile Phe Asp Ala Val Ile Thr Pro Val Leu Asn Pro Val Ile Tyr Thr 285
 275 280
 ttt aga aat aaa gag atg atg gtg gca atg aga aga cga tgc tct cag 912
 Phe Arg Asn Lys Glu Met Met Val Ala Met Arg Arg Arg Cys Ser Gln 300
 290 295
 ttt gtg aat tac agt aaa atc ttt taa 939
 Phe Val Asn Tyr Ser Lys Ile Phe 310
 305

<210> 190
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 190

Met Asp Glu Ala Asn His Ser Val Val Ser Glu Phe Val Phe Leu Gly 15
 1 5 10
 Leu Ser Asp Ser Arg Lys Ile Gln Leu Leu Leu Phe Leu Phe Ser 30
 20 25
 Val Phe Tyr Val Ser Ser Leu Met Gly Asn Leu Leu Ile Val Leu Thr 45
 35 40
 Val Thr Ser Asp Pro Arg Leu Gln Ser Pro Met Tyr Phe Leu Leu Ala 60
 50 55
 Asn Leu Ser Ile Ile Asn Leu Val Phe Cys Ser Ser Thr Ala Pro Lys 80
 65 70 75
 Met Ile Tyr Asp Leu Phe Arg Lys His Lys Thr Ile Ser Phe Gly Gly 95
 85 90
 Cys Val Val Gln Ile Phe Phe Ile His Ala Val Gly Gly Thr Glu Met 110
 100 105

Val Leu Leu Ile Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125

Pro Leu His Tyr Leu Thr Ile Met Asn Pro Gln Arg Cys Ile Leu Phe
 130 135 140

Leu Val Ile Ser Trp Ile Ile Gly Ile Ile His Ser Val Ile Gln Leu
 145 150 155 160

Ala Phe Val Val Asp Leu Leu Phe Cys Gly Pro Asn Glu Leu Asp Ser
 165 170 175

Phe Phe Cys Asp Leu Pro Arg Phe Ile Lys Leu Ala Cys Ile Glu Thr
 180 185 190

Tyr Thr Leu Gly Phe Met Val Thr Ala Asn Ser Gly Phe Ile Ser Leu
 195 200 205

Ala Ser Phe Leu Ile Leu Ile Ile Ser Tyr Ile Phe Ile Leu Val Thr
 210 215 220

Val Gln Lys Lys Ser Ser Gly Gly Ile Phe Lys Ala Phe Ser Met Leu
 225 230 235 240

Ser Ala His Val Ile Val Val Val Leu Val Phe Gly Pro Leu Ile Phe
 245 250 255

Phe Tyr Ile Phe Pro Phe Pro Thr Ser His Leu Asp Lys Phe Leu Ala
 260 265 270

Ile Phe Asp Ala Val Ile Thr Pro Val Leu Asn Pro Val Ile Tyr Thr
 275 280 285

Phe Arg Asn Lys Glu Met Met Val Ala Met Arg Arg Arg Cys Ser Gln
 290 295 300

Phe Val Asn Tyr Ser Lys Ile Phe
 305 310

<210> 191
 <211> 996
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(993)
 <223>

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<400> 191
 atg agt cct gat ggg aac cac agt agt gat cca aca gag ttc gtc ctg 48
 Met Ser Pro Asp Gly Asn His Ser Ser Asp Pro Thr Glu Phe Val Leu 15
 1 5 10

gca ggg ctc cca aat ctc aac agc gca aga gtg gaa tta ttt tct gtg 96
 Ala Gly Leu Pro Asn Leu Asn Ser Ala Arg Val Glu Leu Phe Ser Val 30
 20 25

ttt ctt ctt gtc tat ctc ctg aat ctg aca ggc aat gtg ttg att gtg 144
 Phe Leu Leu Val Tyr Leu Leu Asn Leu Thr Gly Asn Val Leu Ile Val 45
 35 40

ggg gtg gta agg gct gat act cga cta cag acc cct atg tac ttc ttt 192
 Gly Val Val Arg Ala Asp Thr Arg Leu Gln Thr Pro Met Tyr Phe Phe 60
 50 55

ctg ggt aac ctg tcc tgc cta gag ata ctg ctc act tct gtc atc att 240
 Leu Gly Asn Leu Ser Cys Leu Glu Ile Leu Thr Ser Val Ile Ile 80
 65 70 75

cca aag atg ctg agc aat ttc ctc tca agg caa cac act att tcc ttt 288
 Pro Lys Met Leu Ser Asn Phe Leu Ser Arg Gln His Thr Ile Ser Phe 95
 85 90

gct gca tgt atc acc caa ttc tat ttc tac ttc ttt ctc ggg gcc tcc 336
 Ala Ala Cys Ile Thr Gln Phe Tyr Phe Tyr Phe Phe Leu Gly Ala Ser 110
 100 105

gag ttc tta ctg ttg gct gtc atg tct ggc gat cgc tac ctg gcc atc 384
 Glu Phe Leu Leu Leu Ala Val Met Ser Ala Asp Arg Tyr Leu Ala Ile 125
 115 120

tgt cat cct ctg cgc tac ccc ttg ctc atg agt ggg gct gtg tgc ttt 432
 Cys His Pro Leu Arg Tyr Pro Leu Leu Met Ser Gly Ala Val Cys Phe 140
 130 135

cgt gtg gcc ttg gcc tgc tgg gtg ggg gga ctc gtc cct gtg ctt ggt 480
 Arg Val Ala Leu Ala Cys Trp Val Gly Gly Leu Val Pro Val Leu Gly 160
 145 150 155

ccc aca gtg gct gtg gcc ttg ctt cct ttc tgt aag cag ggt gct gtg 528
 Pro Thr Val Ala Val Ala Leu Leu Pro Phe Cys Lys Gln Gly Ala Val 175
 165 170

gta cag cac ttc ttc tgc gac agt ggc cca ctg ctc cgc ctg gct tgc 576
 Val Gln His Phe Phe Cys Asp Ser Gly Pro Leu Leu Arg Leu Ala Cys 190
 180 185

acc aac acc aag aag ctg gag gag act gac ttt gtc ctg gcc tcc ctc 624
 Thr Asn Thr Lys Lys Leu Glu Glu Thr Asp Phe Val Leu Ala Ser Leu 205
 195 200

gtc att gta tct tcc ttg ctg atc act gct gtg tcc tac ggc ctc att 672
 Val Ile Val Ser Ser Leu Leu Ile Thr Ala Val Ser Tyr Gly Leu Ile 220
 210 215

gtg ctg gca gtc ctg agc atc ccc tct gct tca ggc cgt cag aag gcc 720
 Val Leu Ala Val Leu Ser Ile Pro Ser Ala Ser Gly Arg Gln Lys Ala

225	230	235	240	
ttc tct acc tgt acc tcc cac ttg ata gtg gtg acc ctc ttc tat gga				768
Phe Ser Thr Cys Thr Ser His Leu Ile Val Val Thr Leu Phe Tyr Gly				
	245	250	255	
agt gcc att ttt ctc tat gtg cgg cca tcg cag agt ggt tct gtg gac				816
Ser Ala Ile Phe Leu Tyr Val Arg Pro Ser Gln Ser Gly Ser Val Asp				
	260	265	270	
act aac tgg gca gtg aca gta ata acg aca ttt gtg aca cca ctg ttg				864
Thr Asn Trp Ala Val Thr Val Ile Thr Thr Phe Val Thr Pro Leu Leu				
	275	280	285	
aat cca ttc atc tat gcc tta cgt aat gag caa gtc aag gaa gct ttg				912
Asn Pro Phe Ile Tyr Ala Leu Arg Asn Glu Gln Val Lys Glu Ala Leu				
	290	295	300	
aag gac atg ttt agg aag gta gtg gca ggc gtt tta ggg aat ctt tta				960
Lys Asp Met Phe Arg Lys Val Val Ala Gly Val Leu Gly Asn Leu Leu				
	305	310	315	320
ctt gat aaa tgt ctc agt gag aaa gca gta aag taa				996
Leu Asp Lys Cys Leu Ser Glu Lys Ala Val Lys				
	325	330		

<210> 192
 <211> 331
 <212> PRT
 <213> Homo Sapiens

<400> 192

Met Ser Pro Asp Gly Asn His Ser Ser Asp Pro Thr Glu Phe Val Leu
1 5 10 15

Ala Gly Leu Pro Asn Leu Asn Ser Ala Arg Val Glu Leu Phe Ser Val
20 25 30

Phe Leu Leu Val Tyr Leu Leu Asn Leu Thr Gly Asn Val Leu Ile Val
35 40 45

Gly Val Val Arg Ala Asp Thr Arg Leu Gln Thr Pro Met Tyr Phe Phe
50 55 60

Leu Gly Asn Leu Ser Cys Leu Glu Ile Leu Leu Thr Ser Val Ile Ile
65 70 75 80

Pro Lys Met Leu Ser Asn Phe Leu Ser Arg Gln His Thr Ile Ser Phe
85 90 95

Ala Ala Cys Ile Thr Gln Phe Tyr Phe Tyr Phe Phe Leu Gly Ala Ser
100 105 110

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Glu Phe Leu Leu Leu Ala Val Met Ser Ala Asp Arg Tyr Leu Ala Ile
 115 120 125

Cys His Pro Leu Arg Tyr Pro Leu Leu Met Ser Gly Ala Val Cys Phe
 130 135 140

Arg Val Ala Leu Ala Cys Trp Val Gly Gly Leu Val Pro Val Leu Gly
 145 150 155 160

Pro Thr Val Ala Val Ala Leu Leu Pro Phe Cys Lys Gln Gly Ala Val
 165 170 175

Val Gln His Phe Phe Cys Asp Ser Gly Pro Leu Leu Arg Leu Ala Cys
 180 185 190

Thr Asn Thr Lys Lys Leu Glu Glu Thr Asp Phe Val Leu Ala Ser Leu
 195 200 205

Val Ile Val Ser Ser Leu Leu Ile Thr Ala Val Ser Tyr Gly Leu Ile
 210 215 220

Val Leu Ala Val Leu Ser Ile Pro Ser Ala Ser Gly Arg Gln Lys Ala
 225 230 235 240

Phe Ser Thr Cys Thr Ser His Leu Ile Val Val Thr Leu Phe Tyr Gly
 245 250 255

Ser Ala Ile Phe Leu Tyr Val Arg Pro Ser Gln Ser Gly Ser Val Asp
 260 265 270

Thr Asn Trp Ala Val Thr Val Ile Thr Thr Phe Val Thr Pro Leu Leu
 275 280 285

Asn Pro Phe Ile Tyr Ala Leu Arg Asn Glu Gln Val Lys Glu Ala Leu
 290 295 300

Lys Asp Met Phe Arg Lys Val Val Ala Gly Val Leu Gly Asn Leu Leu
 305 310 315 320

Leu Asp Lys Cys Leu Ser Glu Lys Ala Val Lys
 325 330

<210> 193
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>

<221> CDS

<222> (1) .. (942)

<223>

<400> 193

atg tcg aat gag gac atg gaa cag gat aat aca aca ttg ctg aca gag	48
Met Ser Asn Glu Asp Met Glu Gln Asp Asn Thr Thr Leu Leu Thr Glu	
1 5 10 15	
ttt gtt ctc aca gga ctt aca tat cag cca gag tgg aaa atg ccc ctg	96
Phe Val Leu Thr Gly Leu Thr Tyr Gln Pro Glu Trp Lys Met Pro Leu	
20 25 30	
ttc ttg gtg ttc ttg gtg atc tat ctc atc act att gtg tgg aac ctt	144
Phe Leu Val Phe Leu Val Ile Tyr Leu Ile Thr Ile Val Trp Asn Leu	
35 40 45	
ggt ctg att gct ctt atc tgg aat gac cca caa ctt cac atc ccc atg	192
Gly Leu Ile Ala Leu Ile Trp Asn Asp Pro Gln Leu His Ile Pro Met	
50 55 60	
tac ttt ttt ctt ggg agt tta gcc ttt gtt gat gct tgg ata tct tcc	240
Tyr Phe Phe Leu Gly Ser Leu Ala Phe Val Asp Ala Trp Ile Ser Ser	
65 70 75 80	
aca gta act ccc aaa atg ttg gtt aat ttc ttg gcc aaa aac agg atg	288
Thr Val Thr Pro Lys Met Leu Val Asn Phe Leu Ala Lys Asn Arg Met	
85 90 95	
ata tct ctg tct gaa tgc atg att caa ttt ttt tcc ttt gca ttt ggt	336
Ile Ser Leu Ser Glu Cys Met Ile Gln Phe Phe Ser Phe Ala Phe Gly	
100 105 110	
gga act aca gaa tgt ttt ctc ttg gca aca atg gca tat gat cgc tat	384
Gly Thr Thr Glu Cys Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr	
115 120 125	
gta gcc ata tgc aaa cct tta cta tat cca gtg att atg aac aat tca	432
Val Ala Ile Cys Lys Pro Leu Leu Tyr Pro Val Ile Met Asn Asn Ser	
130 135 140	
cta tgc ata cgg ctg tta gcc ttc tca ttt tta ggt ggc ttc ctc cat	480
Leu Cys Ile Arg Leu Leu Ala Phe Ser Phe Leu Gly Gly Phe Leu His	
145 150 155 160	
gcc tta att cat gaa gtc ctt ata ttc aga tta acc ttc tgc aat tct	528
Ala Leu Ile His Glu Val Leu Ile Phe Arg Leu Thr Phe Cys Asn Ser	
165 170 175	
aac ata ata cat cat ttt tac tgt gat att ata cca ctg ttt atg att	576
Asn Ile Ile His His Phe Tyr Cys Asp Ile Ile Pro Leu Phe Met Ile	
180 185 190	
tcc tgt act gac cct tct att aat ttt cta atg gtt ttt att ttg tct	624
Ser Cys Thr Asp Pro Ser Ile Asn Phe Leu Met Val Phe Ile Leu Ser	
195 200 205	
ggc tca att cag gta ttc acc att gtg aca gtt ctt aat tct tac aca	672

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Gly Ser Ile Gln Val Phe Thr Ile Val Thr Val Leu Asn Ser Tyr Thr
 210 215 220 720
 ttt gct ctt ttc aca atc cta aaa aag aag tct gtt aga ggc gta agg
 Phe Ala Leu Phe Thr Ile Leu Lys Lys Lys Ser Val Arg Gly Val Arg
 225 230 235 240
 aaa gcc ttt tcc acc tgt gga gcc cat ctc tta tct gtc tct tta tat
 Lys Ala Phe Ser Thr Cys Gly Ala His Leu Leu Ser Val Ser Leu Tyr
 245 250 255 768
 tat ggc cca ctt atc ttc atg tat ttg cgc cct gca tct cca caa gca
 Tyr Gly Pro Leu Ile Phe Met Tyr Leu Arg Pro Ala Ser Pro Gln Ala
 260 265 270 816
 gat gac caa gat atg ata gac tct gtc ttt tat aca atc ata att cct
 Asp Asp Gln Asp Met Ile Asp Ser Val Phe Tyr Thr Ile Ile Ile Pro
 275 280 285 864
 ttg cta aat ccc att atc tac agt ctg aga aat aaa caa gta ata gat
 Leu Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Gln Val Ile Asp
 290 295 300 912
 tca ttc aca aaa atg gta aaa aga aat gtt tag
 Ser Phe Thr Lys Met Val Lys Arg Asn Val
 305 310 945

<210> 194
 <211> 314
 <212> PRT
 <213> Homo Sapiens

<400> 194

Met Ser Asn Glu Asp Met Glu Gln Asp Asn Thr Thr Leu Leu Thr Glu
 1 5 10 15

Phe Val Leu Thr Gly Leu Thr Tyr Gln Pro Glu Trp Lys Met Pro Leu
 20 25 30

Phe Leu Val Phe Leu Val Ile Tyr Leu Ile Thr Ile Val Trp Asn Leu
 35 40 45

Gly Leu Ile Ala Leu Ile Trp Asn Asp Pro Gln Leu His Ile Pro Met
 50 55 60

Tyr Phe Phe Leu Gly Ser Leu Ala Phe Val Asp Ala Trp Ile Ser Ser
 65 70 75 80

Thr Val Thr Pro Lys Met Leu Val Asn Phe Leu Ala Lys Asn Arg Met
 85 90 95

Ile Ser Leu Ser Glu Cys Met Ile Gln Phe Phe Ser Phe Ala Phe Gly
 100 105 110

Gly Thr Thr Glu Cys Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr
 115 120 125

Val Ala Ile Cys Lys Pro Leu Leu Tyr Pro Val Ile Met Asn Asn Ser
 130 135 140

Leu Cys Ile Arg Leu Leu Ala Phe Ser Phe Leu Gly Gly Phe Leu His
 145 150 155 160

Ala Leu Ile His Glu Val Leu Ile Phe Arg Leu Thr Phe Cys Asn Ser
 165 170 175

Asn Ile Ile His His Phe Tyr Cys Asp Ile Ile Pro Leu Phe Met Ile
 180 185 190

Ser Cys Thr Asp Pro Ser Ile Asn Phe Leu Met Val Phe Ile Leu Ser
 195 200 205

Gly Ser Ile Gln Val Phe Thr Ile Val Thr Val Leu Asn Ser Tyr Thr
 210 215 220

Phe Ala Leu Phe Thr Ile Leu Lys Lys Lys Ser Val Arg Gly Val Arg
 225 230 235 240

Lys Ala Phe Ser Thr Cys Gly Ala His Leu Leu Ser Val Ser Leu Tyr
 245 250 255

Tyr Gly Pro Leu Ile Phe Met Tyr Leu Arg Pro Ala Ser Pro Gln Ala
 260 265 270

Asp Asp Gln Asp Met Ile Asp Ser Val Phe Tyr Thr Ile Ile Ile Pro
 275 280 285

Leu Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Gln Val Ile Asp
 290 295 300

Ser Phe Thr Lys Met Val Lys Arg Asn Val
 305 310

<210> 195

<211> 978

<212> DNA

<213> Homo Sapiens

<220>

<221> CDS

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<222> (1) .. (975)
 <223>

<400> 195
 atg ttc ctt tac ctt tgc ttc att ttt cag agg aca tgc agt gag gag 48
 Met Phe Leu Tyr Leu Cys Phe Ile Phe Gln Arg Thr Cys Ser Glu Glu 15
 1 5 10
 atg gaa gag gaa aat gca aca ttg ctg aca gag ttt gtt ctc aca gga 96
 Met Glu Glu Glu Asn Ala Thr Leu Leu Thr Glu Phe Val Leu Thr Gly 30
 20 25
 ttt tta cat caa cct gac tgt aaa ata ccg ctc ttc ctg gca ttc ttg 144
 Phe Leu His Gln Pro Asp Cys Lys Ile Pro Leu Phe Leu Ala Phe Leu 45
 35 40
 gta ata tat ctc atc acc atc atg ggg aat ctt ggt cta att gtt ctc 192
 Val Ile Tyr Leu Ile Thr Ile Met Gly Asn Leu Gly Leu Ile Val Leu 60
 50 55
 atc tgg aaa gac cct cac ctt cat atc cca atg tac tta ttc ctt ggg 240
 Ile Trp Lys Asp Pro His Leu His Ile Pro Met Tyr Leu Phe Leu Gly 80
 65 70 75
 agt tta gcc ttt gtg gat gct tgc tta tca tcc aca gtg act ccg aag 288
 Ser Leu Ala Phe Val Asp Ala Ser Leu Ser Ser Thr Val Thr Pro Lys 95
 85 90
 atg ctg atc aac ttc tta gct aag agt aag atg ata tct ctc tct gaa 336
 Met Leu Ile Asn Phe Leu Ala Lys Ser Lys Met Ile Ser Leu Ser Glu 110
 100 105
 tgc atg gta caa ttt ttt tcc ctt gta acc act gta acc aca gaa tgt 384
 Cys Met Val Gln Phe Phe Ser Leu Val Thr Thr Val Thr Thr Glu Cys 125
 115 120
 ttt ctc ttg gca aca atg gca tat gat cgc tat gta gcc att tgc aaa 432
 Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys 140
 130 135
 gct tta ctt tat cca gtc att atg acc aat gaa cta tgc att cag cta 480
 Ala Leu Leu Tyr Pro Val Ile Met Thr Asn Glu Leu Cys Ile Gln Leu 160
 145 150 155
 tta gtc ttg tca ttt ata ggt ggc ctt ctt cat gct tta atc cat gaa 528
 Leu Val Leu Ser Phe Ile Gly Gly Leu Leu His Ala Leu Ile His Glu 175
 165 170
 gct ttt tca ttc aga tta acc ttc tgt aat tcc aac ata ata caa cac 576
 Ala Phe Ser Phe Arg Leu Thr Phe Cys Asn Ser Asn Ile Ile Gln His 190
 180 185
 ttt tac tgt gac att atc cca ttg tta aag att tcc tgt act gat tcc 624
 Phe Tyr Cys Asp Ile Ile Pro Leu Leu Lys Ile Ser Cys Thr Asp Ser 205
 195 200
 tct att aac ttt cta atg gtt ttt att ttc gca ggt tct gtt caa gtt 672
 Ser Ile Asn Phe Leu Met Val Phe Ile Phe Ala Gly Ser Val Gln Val 220
 210 215

ttt acc att gga act att ctt ata tct tat aca att atc ctc ttt aca 720
 Phe Thr Ile Gly Thr Ile Leu Ile Ser Tyr Thr Ile Ile Leu Phe Thr
 225 230 235 240
 atc tta gaa aag aag tct atc aaa ggg ata cga aaa gct gtc tcc acc 768
 Ile Leu Glu Lys Lys Ser Ile Lys Gly Ile Arg Lys Ala Val Ser Thr
 245 250 255
 tgt ggg gct cat ctc tta tct gta tct tta tac tat ggc ccc ctc acc 816
 Cys Gly Ala His Leu Leu Ser Val Ser Leu Tyr Tyr Gly Pro Leu Thr
 260 265 270
 ttc aaa tat ctg ggc tct gca tct ccg caa gca gat gac caa gat atg 864
 Phe Lys Tyr Leu Gly Ser Ala Ser Pro Gln Ala Asp Asp Gln Asp Met
 275 280 285
 atg gag tct cta ttt tac act gtc ata gtt cct tta tta aat ccc atg 912
 Met Glu Ser Leu Phe Tyr Thr Val Ile Val Pro Leu Leu Asn Pro Met
 290 295 300
 atc tac agc ctg aga aac aag caa gta ata gct tca ttc aca aaa atg 960
 Ile Tyr Ser Leu Arg Asn Lys Gln Val Ile Ala Ser Phe Thr Lys Met
 305 310 315 320
 ttc aaa agc aat gtt tag 978
 Phe Lys Ser Asn Val
 325

<210> 196
 <211> 325
 <212> PRT
 <213> Homo Sapiens

<400> 196

Met Phe Leu Tyr Leu Cys Phe Ile Phe Gln Arg Thr Cys Ser Glu Glu
1 5 10 15

Met Glu Glu Glu Asn Ala Thr Leu Leu Thr Glu Phe Val Leu Thr Gly
20 25 30

Phe Leu His Gln Pro Asp Cys Lys Ile Pro Leu Phe Leu Ala Phe Leu
35 40 45

Val Ile Tyr Leu Ile Thr Ile Met Gly Asn Leu Gly Leu Ile Val Leu
50 55 60

Ile Trp Lys Asp Pro His Leu His Ile Pro Met Tyr Leu Phe Leu Gly
65 70 75 80

Ser Leu Ala Phe Val Asp Ala Ser Leu Ser Ser Thr Val Thr Pro Lys
85 90 95

Met Leu Ile Asn Phe Leu Ala Lys Ser Lys Met Ile Ser Leu Ser Glu

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100 105 110
 Cys Met Val Gln Phe Phe Ser Leu Val Thr Thr Val Thr Thr Glu Cys
 115 120 125
 Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys
 130 135 140
 Ala Leu Leu Tyr Pro Val Ile Met Thr Asn Glu Leu Cys Ile Gln Leu
 145 150 155 160
 Leu Val Leu Ser Phe Ile Gly Gly Leu Leu His Ala Leu Ile His Glu
 165 170 175
 Ala Phe Ser Phe Arg Leu Thr Phe Cys Asn Ser Asn Ile Ile Gln His
 180 185 190
 Phe Tyr Cys Asp Ile Ile Pro Leu Leu Lys Ile Ser Cys Thr Asp Ser
 195 200 205
 Ser Ile Asn Phe Leu Met Val Phe Ile Phe Ala Gly Ser Val Gln Val
 210 215 220
 Phe Thr Ile Gly Thr Ile Leu Ile Ser Tyr Thr Ile Ile Leu Phe Thr
 225 230 235 240
 Ile Leu Glu Lys Lys Ser Ile Lys Gly Ile Arg Lys Ala Val Ser Thr
 245 250 255
 Cys Gly Ala His Leu Leu Ser Val Ser Leu Tyr Tyr Gly Pro Leu Thr
 260 265 270
 Phe Lys Tyr Leu Gly Ser Ala Ser Pro Gln Ala Asp Asp Gln Asp Met
 275 280 285
 Met Glu Ser Leu Phe Tyr Thr Val Ile Val Pro Leu Leu Asn Pro Met
 290 295 300
 Ile Tyr Ser Leu Arg Asn Lys Gln Val Ile Ala Ser Phe Thr Lys Met
 305 310 315 320
 Phe Lys Ser Asn Val
 325

<210> 197
 <211> 885

<212> DNA

<213> Homo Sapiens

<220>

<221> CDS

<222> (1) .. (885)

<223>

<400> 197

atg	cag	act	gac	ttt	gtc	ctg	ttg	tgc	ttc	aga	cag	aat	cca	cag	gag	48
Met	Gln	Thr	Asp	Phe	Val	Leu	Leu	Cys	Phe	Arg	Gln	Asn	Pro	Gln	Glu	
1				5					10					15		

ctg	aaa	gta	ctt	ttt	gtt	atg	ttc	ttg	ctc	ttc	tac	att	ttg	acc	atg	96
Leu	Lys	Val	Leu	Phe	Val	Met	Phe	Leu	Leu	Phe	Tyr	Ile	Leu	Thr	Met	
			20					25					30			

gtg	ggc	aac	ctg	ctc	att	gta	gtg	acc	gta	act	gtc	agt	gag	acc	ctg	144
Val	Gly	Asn	Leu	Leu	Ile	Val	Val	Thr	Val	Thr	Val	Ser	Glu	Thr	Leu	
		35					40					45				

ggc	tca	cca	atg	tcc	ttc	ttt	ctt	gct	ggc	tta	aca	ttt	ata	gat	atc	192
Gly	Ser	Pro	Met	Ser	Phe	Phe	Leu	Ala	Gly	Leu	Thr	Phe	Ile	Asp	Ile	
	50					55					60					

att	tat	tct	tca	tcc	att	tcc	ccc	aga	ttg	att	tca	gac	ttg	ttc	ttt	240
Ile	Tyr	Ser	Ser	Ser	Ile	Ser	Pro	Arg	Leu	Ile	Ser	Asp	Leu	Phe	Phe	
65					70				75					80		

ggg	aat	aat	tcc	ata	tcc	ttc	caa	tct	ttc	atg	gcc	cag	ctc	ttt	atc	288
Gly	Asn	Asn	Ser	Ile	Ser	Phe	Gln	Ser	Phe	Met	Ala	Gln	Leu	Phe	Ile	
			85					90					95			

gag	cac	ctt	ttt	ggg	ggg	tca	gag	gtc	ttt	ctc	ctg	ttg	gtg	atg	gcc	336
Glu	His	Leu	Phe	Gly	Gly	Ser	Glu	Val	Phe	Leu	Leu	Leu	Val	Met	Ala	
		100						105					110			

tat	gac	cgc	tat	gtg	gcc	atc	tgt	aag	ccc	ttg	cat	tat	ttg	gtt	atc	384
Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Lys	Pro	Leu	His	Tyr	Leu	Val	Ile	
		115					120					125				

atg	aga	caa	tgg	gtg	tgt	gtt	ttg	ctg	ctg	gta	gtg	tcc	tgg	gtt	gga	432
Met	Arg	Gln	Trp	Val	Cys	Val	Leu	Leu	Leu	Val	Val	Ser	Trp	Val	Gly	
	130				135						140					

gga	ttt	ctg	caa	tca	gta	ttt	caa	ctt	agc	att	att	tat	ggg	ctc	cca	480
Gly	Phe	Leu	Gln	Ser	Val	Phe	Gln	Leu	Ser	Ile	Ile	Tyr	Gly	Leu	Pro	
145					150					155				160		

ttc	tgt	ggc	ccc	aat	gtc	att	gat	cat	ttt	ttc	tgt	gac	atg	tat	ccc	528
Phe	Cys	Gly	Pro	Asn	Val	Ile	Asp	His	Phe	Phe	Cys	Asp	Met	Tyr	Pro	
				165					170					175		

tta	ttg	aaa	ctg	gcc	tgc	act	gac	acc	cat	gtt	att	ggc	ctc	tta	gtg	576
Leu	Leu	Lys	Leu	Ala	Cys	Thr	Asp	Thr	His	Val	Ile	Gly	Leu	Leu	Val	
			180					185					190			

gtg	gcc	aat	gga	gga	ctg	tct	tgc	act	att	gcg	ttt	ctg	ctc	tta	ctc	624
Val	Ala	Asn	Gly	Gly	Leu	Ser	Cys	Thr	Ile	Ala	Phe	Leu	Leu	Leu	Leu	
		195					200					205				

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atc tct tat ggt gtc atc ctg cac tct cta aag aaa ctt agt cag aaa 672
 Ile Ser Tyr Gly Val Ile Leu His Ser Leu Lys Lys Leu Ser Gln Lys
 210 215 220
 ggg agg caa aaa gcc cac tca acc tgc agt tcc cac atc act gtg gtt 720
 Gly Arg Gln Lys Ala His Ser Thr Cys Ser Ser His Ile Thr Val Val
 225 230 235 240
 gtc ttc ttc ttt gtt cct tgt att ttt atg tgt gct aga cct gct agg 768
 Val Phe Phe Phe Val Pro Cys Ile Phe Met Cys Ala Arg Pro Ala Arg
 245 250 255
 acc ttc tcc att gac aaa tca gtg agt gtg ttt tat aca gtc ata acc 816
 Thr Phe Ser Ile Asp Lys Ser Val Ser Val Phe Tyr Thr Val Ile Thr
 260 265 270
 cca atg ctg aac ccc tta atc tac act ctg aga aat tct gag atg aca 864
 Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg Asn Ser Glu Met Thr
 275 280 285
 agt gct atg aag aag ctt tag 885
 Ser Ala Met Lys Lys Leu
 290

<210> 198
 <211> 294
 <212> PRT
 <213> Homo Sapiens

<400> 198

Met Gln Thr Asp Phe Val Leu Leu Cys Phe Arg Gln Asn Pro Gln Glu
 1 5 10 15
 Leu Lys Val Leu Phe Val Met Phe Leu Leu Phe Tyr Ile Leu Thr Met
 20 25 30
 Val Gly Asn Leu Leu Ile Val Val Thr Val Thr Val Ser Glu Thr Leu
 35 40 45
 Gly Ser Pro Met Ser Phe Phe Leu Ala Gly Leu Thr Phe Ile Asp Ile
 50 55 60
 Ile Tyr Ser Ser Ser Ile Ser Pro Arg Leu Ile Ser Asp Leu Phe Phe
 65 70 75 80
 Gly Asn Asn Ser Ile Ser Phe Gln Ser Phe Met Ala Gln Leu Phe Ile
 85 90 95
 Glu His Leu Phe Gly Gly Ser Glu Val Phe Leu Leu Leu Val Met Ala
 100 105 110

Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Tyr Leu Val Ile
 115 120 125

Met Arg Gln Trp Val Cys Val Leu Leu Leu Val Val Ser Trp Val Gly
 130 135 140

Gly Phe Leu Gln Ser Val Phe Gln Leu Ser Ile Ile Tyr Gly Leu Pro
 145 150 155 160

Phe Cys Gly Pro Asn Val Ile Asp His Phe Phe Cys Asp Met Tyr Pro
 165 170 175

Leu Leu Lys Leu Ala Cys Thr Asp Thr His Val Ile Gly Leu Leu Val
 180 185 190

Val Ala Asn Gly Gly Leu Ser Cys Thr Ile Ala Phe Leu Leu Leu Leu
 195 200 205

Ile Ser Tyr Gly Val Ile Leu His Ser Leu Lys Lys Leu Ser Gln Lys
 210 215 220

Gly Arg Gln Lys Ala His Ser Thr Cys Ser Ser His Ile Thr Val Val
 225 230 235 240

Val Phe Phe Phe Val Pro Cys Ile Phe Met Cys Ala Arg Pro Ala Arg
 245 250 255

Thr Phe Ser Ile Asp Lys Ser Val Ser Val Phe Tyr Thr Val Ile Thr
 260 265 270

Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg Asn Ser Glu Met Thr
 275 280 285

Ser Ala Met Lys Lys Leu
 290

<210> 199
 <211> 1014
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(1011)
 <223>

<400> 199
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Met Glu Gly Lys Asn Gln Thr Asn Ile Ser Glu Phe Leu Leu Leu Gly
 1 5 10 15
 96
 ttc tca agt tgg caa caa cag cag gtg cta ctc ttt gca ctt ttc ctg
 Phe Ser Ser Trp Gln Gln Gln Gln Val Leu Leu Phe Ala Leu Phe Leu
 20 25 30
 144
 tgt ctc tat tta aca ggg ctg ttt gga aac tta ctc atc ttg ctg gcc
 Cys Leu Tyr Leu Thr Gly Leu Phe Gly Asn Leu Leu Ile Leu Leu Ala
 35 40 45
 192
 att ggc tgc gat cac tgc ctt cac aca ccc atg tat ttc ttc ctt gcc
 Ile Gly Ser Asp His Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ala
 50 55 60
 240
 aat ctg tcc ttg gta gac ctc tgc ctt ccc tca gcc aca gtc ccc aag
 Asn Leu Ser Leu Val Asp Leu Cys Leu Pro Ser Ala Thr Val Pro Lys
 65 70 75 80
 288
 atg cta ctg aac atc caa acc caa acc caa acc atc tcc tat ccc ggc
 Met Leu Leu Asn Ile Gln Thr Gln Thr Gln Thr Ile Ser Tyr Pro Gly
 85 90 95
 336
 tgc ctg gct cag atg tat ttc tgt atg atg ttt gcc aat atg gac aat
 Cys Leu Ala Gln Met Tyr Phe Cys Met Met Phe Ala Asn Met Asp Asn
 100 105 110
 384
 ttt ctt ctc aca gtg atg gca tat gac cgt tac gtg gcc atc tgt cac
 Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 432
 cct tta cat tac tcc acc att atg gcc ctg cgc ctc tgt gcc tct ctg
 Pro Leu His Tyr Ser Thr Ile Met Ala Leu Arg Leu Cys Ala Ser Leu
 130 135 140
 480
 gta gct gca cct tgg gtc att gcc att ttg aac cct ctc ttg cac act
 Val Ala Ala Pro Trp Val Ile Ala Ile Leu Asn Pro Leu Leu His Thr
 145 150 155 160
 528
 ctt atg atg gcc cat ctg cac ttc tgc tct gat aat gtt atc cac cat
 Leu Met Met Ala His Leu His Phe Cys Ser Asp Asn Val Ile His His
 165 170 175
 576
 ttc ttc tgt gat atc aac tct ctc ctc cct ctg tcc tgt tcc gac acc
 Phe Phe Cys Asp Ile Asn Ser Leu Pro Leu Ser Cys Ser Asp Thr
 180 185 190
 624
 agt ctt aat cag ttg agt gtt ctg gct acg gtg ggg ctg atc ttt gtg
 Ser Leu Asn Gln Leu Ser Val Leu Ala Thr Val Gly Leu Ile Phe Val
 195 200 205
 672
 gta cct tca gtg tgt atc ctg gta tcc tat atc ctc att gtt tct gct
 Val Pro Ser Val Cys Ile Leu Val Ser Tyr Ile Leu Ile Val Ser Ala
 210 215 220
 720
 gtg atg aaa gtc cct tct gcc caa gga aaa ctc aag gct ttc tct acc
 Val Met Lys Val Pro Ser Ala Gln Gly Lys Leu Lys Ala Phe Ser Thr
 225 230 235 240
 768
 tgt gga tct cac ctt gcc ttg gtc att ctt ttc tat gga gca aac aca
 Cys Gly Ser His Leu Ala Leu Val Ile Leu Phe Tyr Gly Ala Asn Thr

	245	250	255	
ggg gtc tat atg agc ccc tta tcc aat cac tct act gaa aaa gac tca				816
Gly Val Tyr Met Ser Pro Leu Ser Asn His Ser Thr Glu Lys Asp Ser				
	260	265	270	
gcc gca tca gtc att ttt atg gtt gta gca cct gtg ttg aat cca ttc				864
Ala Ala Ser Val Ile Phe Met Val Val Ala Pro Val Leu Asn Pro Phe				
	275	280	285	
att tac agt tta aga aac aat gaa ctg aag ggg act tta aaa aag acc				912
Ile Tyr Ser Leu Arg Asn Asn Glu Leu Lys Gly Thr Leu Lys Lys Thr				
	290	295	300	
cta agc cgg ccg ggc gcg gtg gct cac gcc tgt aat ccc agc act ttg				960
Leu Ser Arg Pro Gly Ala Val Ala His Ala Cys Asn Pro Ser Thr Leu				
	305	310	315	320
gga ggc cga ggc ggg tgg atc atg agg tca gga gat cga gac cat cct				1008
Gly Gly Arg Gly Gly Trp Ile Met Arg Ser Gly Asp Arg Asp His Pro				
	325	330	335	
ggc taa				1014
Gly				

<210> 200
 <211> 337
 <212> PRT
 <213> Homo Sapiens

<400> 200

Met Glu Gly Lys Asn Gln Thr Asn Ile Ser Glu Phe Leu Leu Leu Gly				
1	5	10	15	
Phe Ser Ser Trp Gln Gln Gln Gln Val Leu Leu Phe Ala Leu Phe Leu				
	20	25	30	
Cys Leu Tyr Leu Thr Gly Leu Phe Gly Asn Leu Leu Ile Leu Leu Ala				
	35	40	45	
Ile Gly Ser Asp His Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ala				
	50	55	60	
Asn Leu Ser Leu Val Asp Leu Cys Leu Pro Ser Ala Thr Val Pro Lys				
	65	70	75	80
Met Leu Leu Asn Ile Gln Thr Gln Thr Gln Thr Ile Ser Tyr Pro Gly				
	85	90	95	
Cys Leu Ala Gln Met Tyr Phe Cys Met Met Phe Ala Asn Met Asp Asn				
	100	105	110	

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Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu His Tyr Ser Thr Ile Met Ala Leu Arg Leu Cys Ala Ser Leu
 130 135 140

Val Ala Ala Pro Trp Val Ile Ala Ile Leu Asn Pro Leu Leu His Thr
 145 150 155 160

Leu Met Met Ala His Leu His Phe Cys Ser Asp Asn Val Ile His His
 165 170 175

Phe Phe Cys Asp Ile Asn Ser Leu Leu Pro Leu Ser Cys Ser Asp Thr
 180 185 190

Ser Leu Asn Gln Leu Ser Val Leu Ala Thr Val Gly Leu Ile Phe Val
 195 200 205

Val Pro Ser Val Cys Ile Leu Val Ser Tyr Ile Leu Ile Val Ser Ala
 210 215 220

Val Met Lys Val Pro Ser Ala Gln Gly Lys Leu Lys Ala Phe Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Ala Leu Val Ile Leu Phe Tyr Gly Ala Asn Thr
 245 250 255

Gly Val Tyr Met Ser Pro Leu Ser Asn His Ser Thr Glu Lys Asp Ser
 260 265 270

Ala Ala Ser Val Ile Phe Met Val Val Ala Pro Val Leu Asn Pro Phe
 275 280 285

Ile Tyr Ser Leu Arg Asn Asn Glu Leu Lys Gly Thr Leu Lys Lys Thr
 290 295 300

Leu Ser Arg Pro Gly Ala Val Ala His Ala Cys Asn Pro Ser Thr Leu
 305 310 315 320

Gly Gly Arg Gly Gly Trp Ile Met Arg Ser Gly Asp Arg Asp His Pro
 325 330 335

Gly

<210> 201
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (942)
 <223>

<400> 201
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 Met Ala Lys Asn Asn Leu Thr Arg Val Thr Glu Phe Ile Leu Met Gly
 1 5 10 15
 ttt atg gac cac ccc aaa ttg gag att ccc ctc ttt ctg gtg ttt ctg 96
 Phe Met Asp His Pro Lys Leu Glu Ile Pro Leu Phe Leu Val Phe Leu
 20 25 30
 agt ttc tac cta gtc acc ctt ctt ggg aat gtg ggg atg att atg tta 144
 Ser Phe Tyr Leu Val Thr Leu Leu Gly Asn Val Gly Met Ile Met Leu
 35 40 45
 atc caa gta gat gtc aaa ctc tac acc cca atg tac ttc ttc ctg agc 192
 Ile Gln Val Asp Val Lys Leu Tyr Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 cac ctc tcc ctg ctg gat gcc tgt tac acc tca gtc atc acc cct cag 240
 His Leu Ser Leu Leu Asp Ala Cys Tyr Thr Ser Val Ile Thr Pro Gln
 65 70 75 80
 atc cta gcc aca ttg gcc aca ggc aaa acg gtc atc tcc tac ggc cac 288
 Ile Leu Ala Thr Leu Ala Thr Gly Lys Thr Val Ile Ser Tyr Gly His
 85 90 95
 tgt gct gcc cag ttc ttt tta ttc acc atc tgt gca ggc aca gag tcg 336
 Cys Ala Ala Gln Phe Phe Leu Phe Thr Ile Cys Ala Gly Thr Glu Ser
 100 105 110
 ttt ctg ctg gca gtg atg gcc tat gat cgc tat gct gcc att cgc aac 384
 Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile Arg Asn
 115 120 125
 cca ctg ctc tat acc gtg gcc atg aat ccc agg ctc tgc tgg agc ctg 432
 Pro Leu Leu Tyr Thr Val Ala Met Asn Pro Arg Leu Cys Trp Ser Leu
 130 135 140
 gtg gta gga gcc tat gtc tgt ggg gtg tca gga gcc atc ctg cgt acc 480
 Val Val Gly Ala Tyr Val Cys Gly Val Ser Gly Ala Ile Leu Arg Thr
 145 150 155 160
 act tgc acc ttc acc ctc tcc ttc tgt aag gac aat caa ata aac ttc 528
 Thr Cys Thr Phe Thr Leu Ser Phe Cys Lys Asp Asn Gln Ile Asn Phe
 165 170 175
 ttc ttc tgt gac ctc cca ccc ctg ctg aag ctt gcc tgc agt gac aca 576
 Phe Phe Cys Asp Leu Pro Pro Leu Lys Leu Ala Cys Ser Asp Thr
 180 185 190
 gca aac atc gag att gtc atc atc ttc ttt ggc aat ttt gtg att ttg 624

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Ala Asn Ile Glu Ile Val Ile Ile Phe Phe Gly Asn Phe Val Ile Leu
 195 200 205
 gcc aat gcc tcc gtc atc ctg att tcc tat ctg ctc atc atc aag acc 672
 Ala Asn Ala Ser Val Ile Leu Ile Ser Tyr Leu Leu Ile Ile Lys Thr
 210 215 220
 att ttg aaa gtg aag tct tca ggt ggc agg gcc aag act ttc tcc aca 720
 Ile Leu Lys Val Lys Ser Ser Gly Gly Arg Ala Lys Thr Phe Ser Thr
 225 230 235 240
 tgt gcc tct cac atc act gct gtg gcc ctt ttc ttt gga gcc ctt atc 768
 Cys Ala Ser His Ile Thr Ala Val Ala Leu Phe Phe Gly Ala Leu Ile
 245 250 255
 ttc atg tat ctg caa agt ggc tca ggc aaa tct ctg gag gaa gac aaa 816
 Phe Met Tyr Leu Gln Ser Gly Ser Gly Lys Ser Leu Glu Glu Asp Lys
 260 265 270
 gtc gtg tct gtc ttc tat aca gtg gtc atc ccc atg ctg aac cct ctg 864
 Val Val Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285
 atc tac agc tta aga aac aaa gat gta aaa gac gcc ttc aga aag gtc 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Arg Lys Val
 290 295 300
 gct agg aga ctc cag gtg tcc ctg agc atg tag 945
 Ala Arg Arg Leu Gln Val Ser Leu Ser Met
 305 310

 <210> 202
 <211> 314
 <212> PRT
 <213> Homo Sapiens

 <400> 202
 Met Ala Lys Asn Asn Leu Thr Arg Val Thr Glu Phe Ile Leu Met Gly
 1 5 10 15
 Phe Met Asp His Pro Lys Leu Glu Ile Pro Leu Phe Leu Val Phe Leu
 20 25 30
 Ser Phe Tyr Leu Val Thr Leu Leu Gly Asn Val Gly Met Ile Met Leu
 35 40 45
 Ile Gln Val Asp Val Lys Leu Tyr Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 His Leu Ser Leu Leu Asp Ala Cys Tyr Thr Ser Val Ile Thr Pro Gln
 65 70 75 80
 Ile Leu Ala Thr Leu Ala Thr Gly Lys Thr Val Ile Ser Tyr Gly His
 85 90 95

Cys Ala Ala Gln Phe Phe Leu Phe Thr Ile Cys Ala Gly Thr Glu Ser
 100 105 110

Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Ala Ala Ile Arg Asn
 115 120 125

Pro Leu Leu Tyr Thr Val Ala Met Asn Pro Arg Leu Cys Trp Ser Leu
 130 135 140

Val Val Gly Ala Tyr Val Cys Gly Val Ser Gly Ala Ile Leu Arg Thr
 145 150 155 160

Thr Cys Thr Phe Thr Leu Ser Phe Cys Lys Asp Asn Gln Ile Asn Phe
 165 170 175

Phe Phe Cys Asp Leu Pro Pro Leu Leu Lys Leu Ala Cys Ser Asp Thr
 180 185 190

Ala Asn Ile Glu Ile Val Ile Ile Phe Phe Gly Asn Phe Val Ile Leu
 195 200 205

Ala Asn Ala Ser Val Ile Leu Ile Ser Tyr Leu Leu Ile Ile Lys Thr
 210 215 220

Ile Leu Lys Val Lys Ser Ser Gly Gly Arg Ala Lys Thr Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Ile Thr Ala Val Ala Leu Phe Phe Gly Ala Leu Ile
 245 250 255

Phe Met Tyr Leu Gln Ser Gly Ser Gly Lys Ser Leu Glu Glu Asp Lys
 260 265 270

Val Val Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Arg Lys Val
 290 295 300

Ala Arg Arg Leu Gln Val Ser Leu Ser Met
 305 310

<210> 203
 <211> 975
 <212> DNA

WO 02/24726

<213> Homo Sapiens

<220>

<221> CDS

<222> (1)..(972)

<223>

<400> 203
 atg gct gta gga agg aac aac aca att gtg aca aaa ttc att ctc ctg 48
 Met Ala Val Gly Arg Asn Asn Thr Ile Val Thr Lys Phe Ile Leu Leu 15
 1 5 10 15
 gga ctt tca gac cat cct caa atg aag att ttc ctt ttc atg tta ttt 96
 Gly Leu Ser Asp His Pro Gln Met Lys Ile Phe Leu Phe Met Leu Phe 30
 20 25 30
 ctg ggg ctc tac ctc ctg acg ttg gcc tgg aac tta agc ctc att gcc 144
 Leu Gly Leu Tyr Leu Leu Thr Leu Ala Trp Asn Leu Ser Leu Ile Ala 45
 35 40 45
 ctc att aag atg gac tct cac ctg cac atg ccc atg tac ttc ttc ctc 192
 Leu Ile Lys Met Asp Ser His Leu His Met Pro Met Tyr Phe Phe Leu 60
 50 55 60
 agt aac ctg tcc ttc ctg gac atc tgc tat gtg tcc tcc acc gcc cct 240
 Ser Asn Leu Ser Phe Leu Asp Ile Cys Tyr Val Ser Ser Thr Ala Pro 80
 65 70 75 80
 aag atg ctg tct gac atc atc aca gag cag aaa acc att tcc ttt gtt 288
 Lys Met Leu Ser Asp Ile Ile Thr Glu Gln Lys Thr Ile Ser Phe Val 95
 85 90 95
 ggc tgt gcc act cag tac ttt gtc ttc tgt ggg atg ggg ctg act gaa 336
 Gly Cys Ala Thr Gln Tyr Phe Val Phe Cys Gly Met Gly Leu Thr Glu 110
 100 105 110
 tgc ttt ctc ctg gca gct atg gcc tat gac cgg tat gct gca atc tgc 384
 Cys Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys 125
 115 120 125
 aac ccc ttg ctt tac aca gtc ctc ata tcc cat aca ctt tgt tta aag 432
 Asn Pro Leu Leu Tyr Thr Val Leu Ile Ser His Thr Leu Cys Leu Lys 140
 130 135 140
 atg gtg gtt ggc gcc tat gtg ggt gga ttc ctt agt tct ttc att gaa 480
 Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Phe Ile Glu 160
 145 150 155 160
 aca tac tct gtc tat cag cat gat ttc tgt ggg ccc tat atg atc aac 528
 Thr Tyr Ser Val Tyr Gln His Asp Phe Cys Gly Pro Tyr Met Ile Asn 175
 165 170 175
 cac ttt ttc tgt gac ctc cct cca gtc ctg gct ctg tcc tgc tct gat 576
 His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys Ser Asp 190
 180 185 190
 acc ttc acc agc gag gtg gtg acc ttc ata gtc agt gtt gtc gtt gga 624
 Thr Phe Thr Ser Glu Val Val Thr Phe Ile Val Ser Val Val Val Gly 205
 195 200 205

ata gtg tct gtg cta gtg gtc ctc atc tct tat ggt tac att gtt gct 672
 Ile Val Ser Val Leu Val Val Leu Ile Ser Tyr Gly Tyr Ile Val Ala
 210 215 220
 gct gtt gtg aag atc agc tca gct aca ggt agg aca aag gcc ttc agc 720
 Ala Val Val Lys Ile Ser Ser Ala Thr Gly Arg Thr Lys Ala Phe Ser
 225 230 235 240
 act tgt gcc tct cac ctg act gct gtg acc ctc ttc tat ggt tct gga 768
 Thr Cys Ala Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Ser Gly
 245 250 255
 ttc ttc atg tac atg cga ccc agt tcc agc tac tcc cta aac agg gac 816
 Phe Phe Met Tyr Met Arg Pro Ser Ser Ser Tyr Ser Leu Asn Arg Asp
 260 265 270
 aag gtg gtg tcc ata ttc tat gcc ttg gtg atc ccc gtg gtg aat ccc 864
 Lys Val Val Ser Ile Phe Tyr Ala Leu Val Ile Pro Val Val Asn Pro
 275 280 285
 atc atc tac agt ttt agg aat aag gag att aaa aat gcc atg agg aaa 912
 Ile Ile Tyr Ser Phe Arg Asn Lys Glu Ile Lys Asn Ala Met Arg Lys
 290 295 300
 gcc atg gaa agg gac ccc ggg att tct cac ggt gga cca ttc att ttt 960
 Ala Met Glu Arg Asp Pro Gly Ile Ser His Gly Gly Pro Phe Ile Phe
 305 310 315 320
 atg acc ttg ggc taa 975
 Met Thr Leu Gly

<210> 204
 <211> 324
 <212> PRT
 <213> Homo Sapiens

<400> 204

Met Ala Val Gly Arg Asn Asn Thr Ile Val Thr Lys Phe Ile Leu Leu
1 5 10 15

Gly Leu Ser Asp His Pro Gln Met Lys Ile Phe Leu Phe Met Leu Phe
20 25 30

Leu Gly Leu Tyr Leu Leu Thr Leu Ala Trp Asn Leu Ser Leu Ile Ala
35 40 45

Leu Ile Lys Met Asp Ser His Leu His Met Pro Met Tyr Phe Phe Leu
50 55 60

Ser Asn Leu Ser Phe Leu Asp Ile Cys Tyr Val Ser Ser Thr Ala Pro
65 70 75 80

Lys Met Leu Ser Asp Ile Ile Thr Glu Gln Lys Thr Ile Ser Phe Val

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85

90

95

Gly Cys Ala Thr Gln Tyr Phe Val Phe Cys Gly Met Gly Leu Thr Glu
 100 105 110

Cys Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys
 115 120 125

Asn Pro Leu Leu Tyr Thr Val Leu Ile Ser His Thr Leu Cys Leu Lys
 130 135 140

Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Phe Ile Glu
 145 150 155 160

Thr Tyr Ser Val Tyr Gln His Asp Phe Cys Gly Pro Tyr Met Ile Asn
 165 170 175

His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys Ser Asp
 180 185 190

Thr Phe Thr Ser Glu Val Val Thr Phe Ile Val Ser Val Val Val Gly
 195 200 205

Ile Val Ser Val Leu Val Val Leu Ile Ser Tyr Gly Tyr Ile Val Ala
 210 215 220

Ala Val Val Lys Ile Ser Ser Ala Thr Gly Arg Thr Lys Ala Phe Ser
 225 230 235 240

Thr Cys Ala Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Ser Gly
 245 250 255

Phe Phe Met Tyr Met Arg Pro Ser Ser Ser Tyr Ser Leu Asn Arg Asp
 260 265 270

Lys Val Val Ser Ile Phe Tyr Ala Leu Val Ile Pro Val Val Asn Pro
 275 280 285

Ile Ile Tyr Ser Phe Arg Asn Lys Glu Ile Lys Asn Ala Met Arg Lys
 290 295 300

Ala Met Glu Arg Asp Pro Gly Ile Ser His Gly Gly Pro Phe Ile Phe
 305 310 315 320

Met Thr Leu Gly

<210> 205
 <211> 948
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(945)
 <223>

<400> 205
 atg tcc ata acc aaa gcc tgg aac agc tca tca gtg acc atg ttc atc 48
 Met Ser Ile Thr Lys Ala Trp Asn Ser Ser Ser Val Thr Met Phe Ile
 1 5 10 15

ctc ctg gga ttc aca gac cat cca gaa ctc cag gcc ctc ctc ttt gtg 96
 Leu Leu Gly Phe Thr Asp His Pro Glu Leu Gln Ala Leu Leu Phe Val
 20 25 30

acc ttc ctg ggc atc tat ctt acc acc ctg gcc tgg aac ctg gcc ctc 144
 Thr Phe Leu Gly Ile Tyr Leu Thr Thr Leu Ala Trp Asn Leu Ala Leu
 35 40 45

att ttt ctg atc aga ggt gac acc cat ctg cac aca ccc atg tac ttc 192
 Ile Phe Leu Ile Arg Gly Asp Thr His Leu His Thr Pro Met Tyr Phe
 50 55 60

ttc cta agc aac tta tct ttc att gac atc tgc tac tct tct gct gtg 240
 Phe Leu Ser Asn Leu Ser Phe Ile Asp Ile Cys Tyr Ser Ser Ala Val
 65 70 75 80

gct ccc aat atg ctc act gac ttc ttc tgg gag cag aag acc ata tca 288
 Ala Pro Asn Met Leu Thr Asp Phe Phe Trp Glu Gln Lys Thr Ile Ser
 85 90 95

ttt gtg ggc tgt gct gct cag ttt ttt ttc ttt gtc ggc atg ggt ctg 336
 Phe Val Gly Cys Ala Ala Gln Phe Phe Phe Phe Val Gly Met Gly Leu
 100 105 110

tct gag tgc ctc ctc ctg act gct atg gca tac gac cga tat gca gcc 384
 Ser Glu Cys Leu Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala
 115 120 125

atc tcc agc ccc ctt ctc tac ccc act atc atg acc cag ggc ctc tgt 432
 Ile Ser Ser Pro Leu Leu Tyr Pro Thr Ile Met Thr Gln Gly Leu Cys
 130 135 140

aca cgc atg gtg gtt ggg gca tat gtt ggt ggc ttc ctg agc tcc ctg 480
 Thr Arg Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Leu
 145 150 155 160

atc cag gcc agc tcc ata ttt agg ctt cac ttt tgc gga ccc aac atc 528
 Ile Gln Ala Ser Ser Ile Phe Arg Leu His Phe Cys Gly Pro Asn Ile
 165 170 175

atc aac cac ttc ttc tgc gac ctc cca cca gtc ctg gct ctg tct tgc 576
 Ile Asn His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys
 180 185 190

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tct gac acc ttc ctc agt caa gtg gtg aat ttc ctc gtg gtg gtc act 624
 Ser Asp Thr Phe Leu Ser Gln Val Val Asn Phe Leu Val Val Val Thr
 195 200 205

gtc gga gga aca tcg ttc ctc caa ctc ctt atc tcc tat ggt tac ata 672
 Val Gly Gly Thr Ser Phe Leu Gln Leu Leu Ile Ser Tyr Gly Tyr Ile
 210 215 220

gtg tct gcg gtc ctg aag atc cct tca gca gag ggc cga tgg aaa gcc 720
 Val Ser Ala Val Leu Lys Ile Pro Ser Ala Glu Gly Arg Trp Lys Ala
 225 230 235 240

tgc aac acg tgt gcc tcg cat ctg atg gtg gtg act ctg ctg ttt ggg 768
 Cys Asn Thr Cys Ala Ser His Leu Met Val Val Thr Leu Leu Phe Gly
 245 250 255

aca gcc ctt ttc gtg tac ttg cga ccc agc tcc agc tac ttg cta ggc 816
 Thr Ala Leu Phe Val Tyr Leu Arg Pro Ser Ser Ser Tyr Leu Leu Gly
 260 265 270

agg gac aag gtg gtg tct gtt ttc tat tca ttg gtg atc ccc atg ctg 864
 Arg Asp Lys Val Val Ser Val Phe Tyr Ser Leu Val Ile Pro Met Leu
 275 280 285

aac cct ctc att tac agt ttg agg aac aaa gag atc aag gat gcc ctg 912
 Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu
 290 295 300

tgg aag gtg ttg gaa agg aag aaa gtg ttt tct tag 948
 Trp Lys Val Leu Glu Arg Lys Lys Val Phe Ser
 305 310 315

<210> 206
 <211> 315
 <212> PRT
 <213> Homo Sapiens

<400> 206

Met Ser Ile Thr Lys Ala Trp Asn Ser Ser Ser Val Thr Met Phe Ile
 1 5 10 15

Leu Leu Gly Phe Thr Asp His Pro Glu Leu Gln Ala Leu Leu Phe Val
 20 25 30

Thr Phe Leu Gly Ile Tyr Leu Thr Thr Leu Ala Trp Asn Leu Ala Leu
 35 40 45

Ile Phe Leu Ile Arg Gly Asp Thr His Leu His Thr Pro Met Tyr Phe
 50 55 60

Phe Leu Ser Asn Leu Ser Phe Ile Asp Ile Cys Tyr Ser Ser Ala Val
 65 70 75 80

Ala Pro Asn Met Leu Thr Asp Phe Phe Trp Glu Gln Lys Thr Ile Ser
85 90 95

Phe Val Gly Cys Ala Ala Gln Phe Phe Phe Phe Val Gly Met Gly Leu
100 105 110

Ser Glu Cys Leu Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala
115 120 125

Ile Ser Ser Pro Leu Leu Tyr Pro Thr Ile Met Thr Gln Gly Leu Cys
130 135 140

Thr Arg Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Leu
145 150 155 160

Ile Gln Ala Ser Ser Ile Phe Arg Leu His Phe Cys Gly Pro Asn Ile
165 170 175

Ile Asn His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys
180 185 190

Ser Asp Thr Phe Leu Ser Gln Val Val Asn Phe Leu Val Val Val Thr
195 200 205

Val Gly Gly Thr Ser Phe Leu Gln Leu Leu Ile Ser Tyr Gly Tyr Ile
210 215 220

Val Ser Ala Val Leu Lys Ile Pro Ser Ala Glu Gly Arg Trp Lys Ala
225 230 235 240

Cys Asn Thr Cys Ala Ser His Leu Met Val Val Thr Leu Leu Phe Gly
245 250 255

Thr Ala Leu Phe Val Tyr Leu Arg Pro Ser Ser Ser Tyr Leu Leu Gly
260 265 270

Arg Asp Lys Val Val Ser Val Phe Tyr Ser Leu Val Ile Pro Met Leu
275 280 285

Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu
290 295 300

Trp Lys Val Leu Glu Arg Lys Lys Val Phe Ser
305 310 315

<210> 207

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<211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

<400> 207
 atg gag atg gaa aac tgc acc agg gta aaa gaa ttt att ttc ctt ggc 48
 Met Glu Met Glu Asn Cys Thr Arg Val Lys Glu Phe Ile Phe Leu Gly 15
 1 5 10
 ctg acc cag aat cgg gaa gtg agc tta gtc tta ttt ctt ttc cta ctc 96
 Leu Thr Gln Asn Arg Glu Val Ser Leu Val Leu Phe Leu Phe Leu Leu 30
 20 25
 ttg gtg tat gtg aca act ttg ctg gga aac ctc ctc atc atg gtc act 144
 Leu Val Tyr Val Thr Thr Leu Leu Gly Asn Leu Leu Ile Met Val Thr 45
 35 40
 gtt acc tgt gaa tct cgc ctt cac acg ccc atg tat ttt ttg ctc cat 192
 Val Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu His 60
 50 55
 aat tta tct att gcc gat atc tgc ttc tct tcc atc aca gtg ccc aag 240
 Asn Leu Ser Ile Ala Asp Ile Cys Phe Ser Ser Ile Thr Val Pro Lys 80
 65 70 75
 gtt ctg gtg gac ctt ctg tct gaa aga aag acc atc tcc ttc aat cat 288
 Val Leu Val Asp Leu Leu Ser Glu Arg Lys Thr Ile Ser Phe Asn His 95
 85 90
 tgc ttc act cag atg ttt cta ttc cac ctt att gga ggg gtg gat gta 336
 Cys Phe Thr Gln Met Phe Leu Phe His Leu Ile Gly Gly Val Asp Val 110
 100 105
 ttt tct ctt tcg gtg atg gca ttg gat cga tat gtg gcc atc tcc aag 384
 Phe Ser Leu Ser Val Met Ala Leu Asp Arg Tyr Val Ala Ile Ser Lys 125
 115 120
 ccc ctg cac tat gcg act atc atg agt aga gac cat tgc att ggg ctc 432
 Pro Leu His Tyr Ala Thr Ile Met Ser Arg Asp His Cys Ile Gly Leu 140
 130 135
 aca gtg gct gcc tgg ttg ggg ggc ttt gtc cac tcc atc gtg cag att 480
 Thr Val Ala Ala Trp Leu Gly Gly Phe Val His Ser Ile Val Gln Ile 160
 145 150 155
 tcc ctg ttg ctc cca ctc cct ttc tgc gga ccc aat gtt ctt gac act 528
 Ser Leu Leu Leu Pro Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Thr 175
 165 170
 ttc tac tgt gat gtc cac cgg gtc ctc aaa ctg gcc cat aca gac att 576
 Phe Tyr Cys Asp Val His Arg Val Leu Lys Leu Ala His Thr Asp Ile 190
 180 185
 ttc ata ctt gaa cta cta atg att tcc aac aat gga ctg ctc acc aca 624
 Phe Ile Leu Glu Leu Leu Met Ile Ser Asn Asn Gly Leu Leu Thr Thr

195	200	205	
ctg tgg ttt ttc ctg ctc ctg gtg tcc tac ata gtc ata tta tca tta			672
Leu Trp Phe Phe Leu Leu Leu Val Ser Tyr Ile Val Ile Leu Ser Leu			
210	215	220	
ccc aag tct cag gca gga gag ggc agg agg aaa gcc atc tcc acc tgc			720
Pro Lys Ser Gln Ala Gly Glu Gly Arg Arg Lys Ala Ile Ser Thr Cys			
225	230	235	240
acc tcc cac atc act gtg gtg acc ctg cat ttc gtg ccc tgc atc tat			768
Thr Ser His Ile Thr Val Val Thr Leu His Phe Val Pro Cys Ile Tyr			
245	250	255	
gtc tat gcc cgg ccc ttc act gcc ctc ccc atg gat aag gcc atc tct			816
Val Tyr Ala Arg Pro Phe Thr Ala Leu Pro Met Asp Lys Ala Ile Ser			
260	265	270	
gtc acc ttc act gtc atc tcc cct ctg ctc aac ccc ttg atc tac act			864
Val Thr Phe Thr Val Ile Ser Pro Leu Leu Asn Pro Leu Ile Tyr Thr			
275	280	285	
ctg agg aac cat gag atg aag tca gcc atg agg aga ctg aag aga aga			912
Leu Arg Asn His Glu Met Lys Ser Ala Met Arg Arg Leu Lys Arg Arg			
290	295	300	
ctt gtg cct tct gat aga aaa tag			936
Leu Val Pro Ser Asp Arg Lys			
305	310		

<210> 208
 <211> 311
 <212> PRT
 <213> Homo Sapiens

<400> 208

Met Glu Met Glu Asn Cys Thr Arg Val Lys Glu Phe Ile Phe Leu Gly
 1 5 10 15

Leu Thr Gln Asn Arg Glu Val Ser Leu Val Leu Phe Leu Phe Leu Leu
 20 25 30

Leu Val Tyr Val Thr Thr Leu Leu Gly Asn Leu Leu Ile Met Val Thr
 35 40 45

Val Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu His
 50 55 60

Asn Leu Ser Ile Ala Asp Ile Cys Phe Ser Ser Ile Thr Val Pro Lys
 65 70 75 80

Val Leu Val Asp Leu Leu Ser Glu Arg Lys Thr Ile Ser Phe Asn His
 85 90 95

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Cys Phe Thr Gln Met Phe Leu Phe His Leu Ile Gly Gly Val Asp Val
 100 105 110

Phe Ser Leu Ser Val Met Ala Leu Asp Arg Tyr Val Ala Ile Ser Lys
 115 120 125

Pro Leu His Tyr Ala Thr Ile Met Ser Arg Asp His Cys Ile Gly Leu
 130 135 140

Thr Val Ala Ala Trp Leu Gly Gly Phe Val His Ser Ile Val Gln Ile
 145 150 155 160

Ser Leu Leu Leu Pro Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Thr
 165 170 175

Phe Tyr Cys Asp Val His Arg Val Leu Lys Leu Ala His Thr Asp Ile
 180 185 190

Phe Ile Leu Glu Leu Leu Met Ile Ser Asn Asn Gly Leu Leu Thr Thr
 195 200 205

Leu Trp Phe Phe Leu Leu Leu Val Ser Tyr Ile Val Ile Leu Ser Leu
 210 215 220

Pro Lys Ser Gln Ala Gly Glu Gly Arg Arg Lys Ala Ile Ser Thr Cys
 225 230 235 240

Thr Ser His Ile Thr Val Val Thr Leu His Phe Val Pro Cys Ile Tyr
 245 250 255

Val Tyr Ala Arg Pro Phe Thr Ala Leu Pro Met Asp Lys Ala Ile Ser
 260 265 270

Val Thr Phe Thr Val Ile Ser Pro Leu Leu Asn Pro Leu Ile Tyr Thr
 275 280 285

Leu Arg Asn His Glu Met Lys Ser Ala Met Arg Arg Leu Lys Arg Arg
 290 295 300

Leu Val Pro Ser Asp Arg Lys
 305 310

<210> 209
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>

<221> CDS

<222> (1) .. (942)

<223>

<400> 209

atg	gac	cag	atc	aac	cac	act	aat	gtg	aag	gag	ttt	ttc	ttc	ctg	gaa	48
Met	Asp	Gln	Ile	Asn	His	Thr	Asn	Val	Lys	Glu	Phe	Phe	Phe	Leu	Glu	
1				5					10					15		

ctt	aca	cgt	tcc	cga	gag	ctg	gag	ttt	ttc	ttg	ttt	gtg	gtc	ttc	ttt	96
Leu	Thr	Arg	Ser	Arg	Glu	Leu	Glu	Phe	Phe	Leu	Phe	Val	Val	Phe	Phe	
			20					25					30			

gct	gtg	tat	gta	gca	aca	gtc	ctg	gga	aat	gca	ctc	att	gtg	gtc	act	144
Ala	Val	Tyr	Val	Ala	Thr	Val	Leu	Gly	Asn	Ala	Leu	Ile	Val	Val	Thr	
		35					40					45				

att	acc	tgt	gag	tcc	cgc	cta	cac	act	cct	atg	tac	ttt	ctc	ctg	cgg	192
Ile	Thr	Cys	Glu	Ser	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu	Leu	Arg	
	50					55					60					

aac	aaa	tca	gtc	ctg	gac	atc	gtt	ttt	tca	tct	atc	acc	gtc	ccc	aag	240
Asn	Lys	Ser	Val	Leu	Asp	Ile	Val	Phe	Ser	Ser	Ile	Thr	Val	Pro	Lys	
65					70					75				80		

ttc	ctg	gtg	gat	ctt	tta	tca	gac	agg	aaa	acc	atc	tcc	tac	aat	gac	288
Phe	Leu	Val	Asp	Leu	Leu	Ser	Asp	Arg	Lys	Thr	Ile	Ser	Tyr	Asn	Asp	
				85					90					95		

tgc	atg	gca	cag	atc	ttt	ttc	ttc	cac	ttt	gct	ggg	ggg	gca	gat	att	336
Cys	Met	Ala	Gln	Ile	Phe	Phe	Phe	His	Phe	Ala	Gly	Gly	Ala	Asp	Ile	
			100					105					110			

ttt	ttc	ctc	tct	gtg	atg	gcc	tat	gac	aga	tac	ctt	gca	atc	gcc	aag	384
Phe	Phe	Leu	Ser	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Leu	Ala	Ile	Ala	Lys	
		115					120					125				

ccc	ctg	cac	tat	gtg	acc	atg	atg	agg	aaa	gag	gtg	tgg	gtg	gcc	ttg	432
Pro	Leu	His	Tyr	Val	Thr	Met	Met	Arg	Lys	Glu	Val	Trp	Val	Ala	Leu	
	130					135					140					

gtg	gtg	gct	tct	tgg	gtg	agt	ggg	ggg	ttg	cat	tca	atc	atc	cag	gta	480
Val	Val	Ala	Ser	Trp	Val	Ser	Gly	Gly	Leu	His	Ser	Ile	Ile	Gln	Val	
145				150						155				160		

att	ctg	atg	ctt	cca	ttc	ccc	ttc	tgt	ggc	ccc	aac	aca	ctg	gat	gcc	528
Ile	Leu	Met	Leu	Pro	Phe	Pro	Phe	Cys	Gly	Pro	Asn	Thr	Leu	Asp	Ala	
				165					170					175		

ttc	tac	tgt	tat	gtg	ctc	cag	gtg	gta	aaa	ctg	gcc	tgc	act	gac	acc	576
Phe	Tyr	Cys	Tyr	Val	Leu	Gln	Val	Val	Lys	Leu	Ala	Cys	Thr	Asp	Thr	
			180					185					190			

ttt	gct	ttg	gag	ctt	ttc	atg	atc	tct	aac	aac	gga	ctg	gtg	acc	ctg	624
Phe	Ala	Leu	Glu	Leu	Phe	Met	Ile	Ser	Asn	Asn	Gly	Leu	Val	Thr	Leu	
		195					200					205				

ctc	tgg	ttc	ctc	ctg	ctc	ctg	ggc	tcc	tac	act	gtc	att	ctg	gtg	atg	672
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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Leu Trp Phe Leu Leu Leu Leu Gly Ser Tyr Thr Val Ile Leu Val Met
 210 215 220
 ctg aga tcc cac tct ggg gag ggg cgg aac aag gcc ctc tcc acg tgc 720
 Leu Arg Ser His Ser Gly Glu Gly Arg Asn Lys Ala Leu Ser Thr Cys 240
 225 230 235
 acg tcc cac atg ctg gtg gtg act ctt cac ttc gtg cct tgt gtt tac 768
 Thr Ser His Met Leu Val Val Thr Leu His Phe Val Pro Cys Val Tyr 255
 245 250
 atc tac tgc cgg ccc ttc atg acg ctg ccc atg gac aca acc ata tcc 816
 Ile Tyr Cys Arg Pro Phe Met Thr Leu Pro Met Asp Thr Thr Ile Ser 270
 260 265
 att aat aac acg gtc att acc ccc atg ctg aac ccc atc atc tat tcc 864
 Ile Asn Asn Thr Val Ile Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser 285
 275 280
 ctg aga aat caa gag atg aag tca gcc atg cag agg ctg cag agg aga 912
 Leu Arg Asn Gln Glu Met Lys Ser Ala Met Gln Arg Leu Gln Arg Arg 300
 290 295
 ctt ggg cct tcc gag agc aga aaa tgg ggg tga 945
 Leu Gly Pro Ser Glu Ser Arg Lys Trp Gly
 305 310

<210> 210
 <211> 314
 <212> PRT
 <213> Homo Sapiens

<400> 210

Met Asp Gln Ile Asn His Thr Asn Val Lys Glu Phe Phe Phe Leu Glu
 1 5 10 15

Leu Thr Arg Ser Arg Glu Leu Glu Phe Phe Leu Phe Val Val Phe Phe
 20 25 30

Ala Val Tyr Val Ala Thr Val Leu Gly Asn Ala Leu Ile Val Val Thr
 35 40 45

Ile Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Arg
 50 55 60

Asn Lys Ser Val Leu Asp Ile Val Phe Ser Ser Ile Thr Val Pro Lys
 65 70 75 80

Phe Leu Val Asp Leu Leu Ser Asp Arg Lys Thr Ile Ser Tyr Asn Asp
 85 90 95

Cys Met Ala Gln Ile Phe Phe Phe His Phe Ala Gly Gly Ala Asp Ile
 100 105 110

Phe Phe Leu Ser Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Ala Lys
 115 120 125

Pro Leu His Tyr Val Thr Met Met Arg Lys Glu Val Trp Val Ala Leu
 130 135 140

Val Val Ala Ser Trp Val Ser Gly Gly Leu His Ser Ile Ile Gln Val
 145 150 155 160

Ile Leu Met Leu Pro Phe Pro Phe Cys Gly Pro Asn Thr Leu Asp Ala
 165 170 175

Phe Tyr Cys Tyr Val Leu Gln Val Val Lys Leu Ala Cys Thr Asp Thr
 180 185 190

Phe Ala Leu Glu Leu Phe Met Ile Ser Asn Asn Gly Leu Val Thr Leu
 195 200 205

Leu Trp Phe Leu Leu Leu Leu Gly Ser Tyr Thr Val Ile Leu Val Met
 210 215 220

Leu Arg Ser His Ser Gly Glu Gly Arg Asn Lys Ala Leu Ser Thr Cys
 225 230 235 240

Thr Ser His Met Leu Val Val Thr Leu His Phe Val Pro Cys Val Tyr
 245 250 255

Ile Tyr Cys Arg Pro Phe Met Thr Leu Pro Met Asp Thr Thr Ile Ser
 260 265 270

Ile Asn Asn Thr Val Ile Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser
 275 280 285

Leu Arg Asn Gln Glu Met Lys Ser Ala Met Gln Arg Leu Gln Arg Arg
 290 295 300

Leu Gly Pro Ser Glu Ser Arg Lys Trp Gly
 305 310

<210> 211
 <211> 948
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS

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<222> (1) .. (945)

<223>

<400> 211
 atg gag acg tgg gtg aac cag tcc tac aca gat ggc ttc ttc ctc tta 48
 Met Glu Thr Trp Val Asn Gln Ser Tyr Thr Asp Gly Phe Phe Leu Leu 15
 1 5 10

ggc atc ttc tcc cac agt act gct gac ctt gtc ctc ttc tcc gtg gtt 96
 Gly Ile Phe Ser His Ser Thr Ala Asp Leu Val Leu Phe Ser Val Val 30
 20 25

atg gcg gtc ttc aca gtg gcc ctc tgt ggg aat gtc ctc ctc atc ttc 144
 Met Ala Val Phe Thr Val Ala Leu Cys Gly Asn Val Leu Leu Ile Phe 45
 35 40

ctc atc tac atg gac cct cac ctt cac acc ccc atg tac ttc ttc ctc 192
 Leu Ile Tyr Met Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu 60
 50 55

agc cag ctc tcc ctc atg gac ctc atg ttg gtc tgt acc aat gtg cca 240
 Ser Gln Leu Ser Leu Met Asp Leu Met Leu Val Cys Thr Asn Val Pro 80
 65 70 75

aag atg gca gcc aac ttc ctg tct ggc agg aag tcc atc tcc ttt gtg 288
 Lys Met Ala Ala Asn Phe Leu Ser Gly Arg Lys Ser Ile Ser Phe Val 95
 85 90

ggc tgt ggc ata caa att ggc ctc ttt gtc tgt ctt gtg gga tct gag 336
 Gly Cys Gly Ile Gln Ile Gly Leu Phe Val Cys Leu Val Gly Ser Glu 110
 100 105

ggg ctc ttg ctg gga ctc atg gct tat gac cgc tat gtg gcc att agc 384
 Gly Leu Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Ser 125
 115 120

cac cca ctt cac tat ccc atc ctc atg aat cag agg gtc tgt ctc cag 432
 His Pro Leu His Tyr Pro Ile Leu Met Asn Gln Arg Val Cys Leu Gln 140
 130 135

att act ggg agc tcc tgg gcc ttt ggg ata atc gat ggc ttg atc cag 480
 Ile Thr Gly Ser Ser Trp Ala Phe Gly Ile Ile Asp Gly Leu Ile Gln 160
 145 150 155

atg gtg gta gta atg aat ttc ccc tac tgt ggc ttg agg aag gtg aac 528
 Met Val Val Val Met Asn Phe Pro Tyr Cys Gly Leu Arg Lys Val Asn 175
 165 170

cat ttc ttc tgt gag atg cta tcc ttg ttg aag ctg gcc tgt gta gac 576
 His Phe Phe Cys Glu Met Leu Ser Leu Leu Lys Leu Ala Cys Val Asp 190
 180 185

aca tcc ctg ttt gag aag gtg ata ttt gct tgc tgt gtc ttc atg ctt 624
 Thr Ser Leu Phe Glu Lys Val Ile Phe Ala Cys Cys Val Phe Met Leu 205
 195 200

ctc ttc cca ttc tcc atc atc gtg gcc tcc tat gct cac att cta ggg 672
 Leu Phe Pro Phe Ser Ile Ile Val Ala Ser Tyr Ala His Ile Leu Gly 220
 210 215

act gtg ctg caa atg cac tct gct cag gcc tgg aaa aag gcc ctg gcc 720
 Thr Val Leu Gln Met His Ser Ala Gln Ala Trp Lys Lys Ala Leu Ala
 225 230 235 240

acc tgc tcc tcc cac ctg aca gct gtc acc ctc ttc tat ggg gca gcc 768
 Thr Cys Ser Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Ala Ala
 245 250 255

atg ttc atc tac ctg agg cct agg cac tac cgg gcc ccc agc cat gac 816
 Met Phe Ile Tyr Leu Arg Pro Arg His Tyr Arg Ala Pro Ser His Asp
 260 265 270

aag gtg gcc tct atc ttc tac acg gtc ctt act ccc atg ctc aac ccc 864
 Lys Val Ala Ser Ile Phe Tyr Thr Val Leu Thr Pro Met Leu Asn Pro
 275 280 285

ctc att tac agc ttg agg aac agg gag gtg atg ggg gca ctg agg aag 912
 Leu Ile Tyr Ser Leu Arg Asn Arg Glu Val Met Gly Ala Leu Arg Lys
 290 295 300

ggg ctg gac cgc tgc agg atc ggc agc cag cac tga 948
 Gly Leu Asp Arg Cys Arg Ile Gly Ser Gln His
 305 310 315

<210> 212
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 <212> PRT
 <213> Homo Sapiens

<400> 212

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Gly Ile Phe Ser His Ser Thr Ala Asp Leu Val Leu Phe Ser Val Val
 20 25 30

Met Ala Val Phe Thr Val Ala Leu Cys Gly Asn Val Leu Leu Ile Phe
 35 40 45

Leu Ile Tyr Met Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Ser Gln Leu Ser Leu Met Asp Leu Met Leu Val Cys Thr Asn Val Pro
 65 70 75 80

Lys Met Ala Ala Asn Phe Leu Ser Gly Arg Lys Ser Ile Ser Phe Val
 85 90 95

Gly Cys Gly Ile Gln Ile Gly Leu Phe Val Cys Leu Val Gly Ser Glu
 100 105 110

Gly Leu Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Ser

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<222> (1) .. (933)
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 Met Lys Ile Phe Asn Ser Pro Ser Asn Ser Ser Thr Phe Thr Gly Phe
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atc ctc ctg ggc ttc cct tgc ccc agg gag ggg cag atc ctc ctc ttt 96
 Ile Leu Leu Gly Phe Pro Cys Pro Arg Glu Gly Gln Ile Leu Leu Phe
 20 25 30

gtg ctc ttc act gtt gtt tac ctc ctg acc ctc atg ggc aat ggt tcc 144
 Val Leu Phe Thr Val Val Tyr Leu Leu Thr Leu Met Gly Asn Gly Ser
 35 40 45

atc atc tgt gct gtg cac tgg gat cag aga ctc cac gcc ccc atg tac 192
 Ile Ile Cys Ala Val His Trp Asp Gln Arg Leu His Ala Pro Met Tyr
 50 55 60

atc ctg ctc gcc aac ttc tcc ttc ttg gag ata tgt tat gtc acc tcc 240
 Ile Leu Leu Ala Asn Phe Ser Phe Leu Glu Ile Cys Tyr Val Thr Ser
 65 70 75 80

aca gtc ccc agc atg ctg gcc aac ttc ctc tct gac acc aag atc atc 288
 Thr Val Pro Ser Met Leu Ala Asn Phe Leu Ser Asp Thr Lys Ile Ile
 85 90 95

tcg ttc tct ggc tgc ttc ctc cag ttc tac ttt ttc ttc tcc ttg ggc 336
 Ser Phe Ser Gly Cys Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly
 100 105 110

tct aca gaa tgc ttt ttc ctg gca gtt atg gca ttt gat cga tac ctt 384
 Ser Thr Glu Cys Phe Phe Leu Ala Val Met Ala Phe Asp Arg Tyr Leu
 115 120 125

gcc atc tgt cgg cct cta cgc tat cca acc att atg acc aga cgt ctc 432
 Ala Ile Cys Arg Pro Leu Arg Tyr Pro Thr Ile Met Thr Arg Arg Leu
 130 135 140

tgt acc aat ctt gtg gtc aat tgc tgg gta ctt ggt ttc atc tgg ttc 480
 Cys Thr Asn Leu Val Val Asn Cys Trp Val Leu Gly Phe Ile Trp Phe
 145 150 155 160

ttg att cct atc gtc aac atc tcc caa atg tcc ttc tgt gga tct agg 528
 Leu Ile Pro Ile Val Asn Ile Ser Gln Met Ser Phe Cys Gly Ser Arg
 165 170 175

att att gac cac ttc cta tgt gac cca gct cct ctt cta act ctc act 576
 Ile Ile Asp His Phe Leu Cys Asp Pro Ala Pro Leu Leu Thr Leu Thr
 180 185 190

tgc aaa aaa ggc cct gtg ata gag ctt gtc ttt tct gtc tta agt cct 624
 Cys Lys Lys Gly Pro Val Ile Glu Leu Val Phe Ser Val Leu Ser Pro
 195 200 205

ctg cct gtc ttt atg ctc ttt ctc ttc att gtg ggg tcc tat gct ctg 672
 Leu Pro Val Phe Met Leu Phe Leu Phe Ile Val Gly Ser Tyr Ala Leu
 210 215 220

gtc gtg aga gct gtg ttg agg gtc cct tca gca gct ggg aga aga aag 720
 Val Val Arg Ala Val Leu Arg Val Pro Ser Ala Ala Gly Arg Arg Lys
 225 230 235 240

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gct ttc tcc acc tgt ggg tct cac ctg gct gtg gtt tca ctg ttc tac 768
 Ala Phe Ser Thr Cys Gly Ser His Leu Ala Val Val Ser Leu Phe Tyr 255
 245 250

ggc tca gta ctg gtc atg tat ggg agc cca cca tct aag aat gaa gct 816
 Gly Ser Val Leu Val Met Tyr Gly Ser Pro Pro Ser Lys Asn Glu Ala 270
 260 265

gga aag cag aag act gtg act ctg ttt tat tct gtt gtt acc cca ctg 864
 Gly Lys Gln Lys Thr Val Thr Leu Phe Tyr Ser Val Val Thr Pro Leu 285
 275 280

ctt aac cct gtg ata tat agt ctt agg aac aaa gat atg aga aaa gct 912
 Leu Asn Pro Val Ile Tyr Ser Leu Arg Asn Lys Asp Met Arg Lys Ala 300
 290 295

ctg aag aaa ttt tgg gga aca taa 936
 Leu Lys Lys Phe Trp Gly Thr 310
 305

<210> 214
 <211> 311
 <212> PRT
 <213> Homo Sapiens

<400> 214
 Met Lys Ile Phe Asn Ser Pro Ser Asn Ser Ser Thr Phe Thr Gly Phe 15
 1 5 10

Ile Leu Leu Gly Phe Pro Cys Pro Arg Glu Gly Gln Ile Leu Leu Phe 30
 20 25

Val Leu Phe Thr Val Val Tyr Leu Leu Thr Leu Met Gly Asn Gly Ser 45
 35 40

Ile Ile Cys Ala Val His Trp Asp Gln Arg Leu His Ala Pro Met Tyr 60
 50 55

Ile Leu Leu Ala Asn Phe Ser Phe Leu Glu Ile Cys Tyr Val Thr Ser 80
 65 70 75

Thr Val Pro Ser Met Leu Ala Asn Phe Leu Ser Asp Thr Lys Ile Ile 95
 85 90

Ser Phe Ser Gly Cys Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly 110
 100 105

Ser Thr Glu Cys Phe Phe Leu Ala Val Met Ala Phe Asp Arg Tyr Leu 125
 115 120

Ala Ile Cys Arg Pro Leu Arg Tyr Pro Thr Ile Met Thr Arg Arg Leu
 130 135 140

Cys Thr Asn Leu Val Val Asn Cys Trp Val Leu Gly Phe Ile Trp Phe
 145 150 155 160

Leu Ile Pro Ile Val Asn Ile Ser Gln Met Ser Phe Cys Gly Ser Arg
 165 170 175

Ile Ile Asp His Phe Leu Cys Asp Pro Ala Pro Leu Leu Thr Leu Thr
 180 185 190

Cys Lys Lys Gly Pro Val Ile Glu Leu Val Phe Ser Val Leu Ser Pro
 195 200 205

Leu Pro Val Phe Met Leu Phe Leu Phe Ile Val Gly Ser Tyr Ala Leu
 210 215 220

Val Val Arg Ala Val Leu Arg Val Pro Ser Ala Ala Gly Arg Arg Lys
 225 230 235 240

Ala Phe Ser Thr Cys Gly Ser His Leu Ala Val Val Ser Leu Phe Tyr
 245 250 255

Gly Ser Val Leu Val Met Tyr Gly Ser Pro Pro Ser Lys Asn Glu Ala
 260 265 270

Gly Lys Gln Lys Thr Val Thr Leu Phe Tyr Ser Val Val Thr Pro Leu
 275 280 285

Leu Asn Pro Val Ile Tyr Ser Leu Arg Asn Lys Asp Met Arg Lys Ala
 290 295 300

Leu Lys Lys Phe Trp Gly Thr
 305 310

<210> 215
 <211> 993
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 <213> Homo Sapiens

<220>
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 <222> (1)..(990)
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<400> 215
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Met Phe Phe Ile Ile His Ser Leu Val Thr Ser Val Phe Leu Thr Ala	15	
1	5	
ttg gga ccc cag aac aga aca atg cat ttt gtg act gag ttt gtc ctc		96
Leu Gly Pro Gln Asn Arg Thr Met His Phe Val Thr Glu Phe Val Leu	20 25 30	
ctg ggt ttc cat ggt caa agg gag atg cag agc tgc ttc ttc tca ttc		144
Leu Gly Phe His Gly Gln Arg Glu Met Gln Ser Cys Phe Phe Ser Phe	35 40 45	
atc ctg gtt ctc tat ctc ctg aca ctg cta ggg aat gga gct att gtc		192
Ile Leu Val Leu Tyr Leu Thr Leu Leu Gly Asn Gly Ala Ile Val	50 55 60	
tgt gca gtg aaa ttg gac agg cgg ctc cac aca ccc atg tac atc ctt		240
Cys Ala Val Lys Leu Asp Arg Arg Leu His Thr Pro Met Tyr Ile Leu	65 70 75 80	
ctg gga aac ttt gcc ttt cta gag atc tgg tac att tcc tcc act gtc		288
Leu Gly Asn Phe Ala Phe Leu Glu Ile Trp Tyr Ile Ser Ser Thr Val	85 90 95	
cca aac atg cta gtc aat atc ctc tct gag att aaa acc atc tcc ttc		336
Pro Asn Met Leu Val Asn Ile Leu Ser Glu Ile Lys Thr Ile Ser Phe	100 105 110	
tct ggt tgc ttc ctg caa ttc tat ttc ttt ttt tca ctg ggt aca aca		384
Ser Gly Cys Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly Thr Thr	115 120 125	
gag tgt ttc ttt tta tca gtt atg gct tat gat cgg tac ctg gcc atc		432
Glu Cys Phe Phe Leu Ser Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile	130 135 140	
tgt cgt cca tta cac tac ccc tcc atc atg act ggg aag ttc tgt ata		480
Cys Arg Pro Leu His Tyr Pro Ser Ile Met Thr Gly Lys Phe Cys Ile	145 150 155 160	
att ctg gtc tgt gta tgc tgg gta ggc gga ttt ctc tgc tat cca gtc		528
Ile Leu Val Cys Val Cys Trp Val Gly Gly Phe Leu Cys Tyr Pro Val	165 170 175	
cct att gtt ctt atc tcc caa ctt ccc ttc tgt ggg ccc aac atc att		576
Pro Ile Val Leu Ile Ser Gln Leu Pro Phe Cys Gly Pro Asn Ile Ile	180 185 190	
gac cac ttg gtg tgt gac cca ggc cca ttg ttt gca ctg gcc tgc atc		624
Asp His Leu Val Cys Asp Pro Gly Pro Leu Phe Ala Leu Ala Cys Ile	195 200 205	
tct gct cct tcc act gag ctt atc tgt tac acc ttc aac tgc atg att		672
Ser Ala Pro Ser Thr Glu Leu Ile Cys Tyr Thr Phe Asn Ser Met Ile	210 215 220	
atc ttt ggg ccc ttc ctc tcc atc ttg gga tct tac act ctg gtc atc		720
Ile Phe Gly Pro Phe Leu Ser Ile Leu Gly Ser Tyr Thr Leu Val Ile	225 230 235 240	
aga gct gtg ctt tgt att ccc tct ggt gct ggt cga act aaa gct ttc		768
Arg Ala Val Leu Cys Ile Pro Ser Gly Ala Gly Arg Thr Lys Ala Phe		

	245	250	255	
tcc aca tgt ggg tcc cac cta atg gtg gtg tct cta ttc tat gga acc				816
Ser Thr Cys Gly Ser His Leu Met Val Val Ser Leu Phe Tyr Gly Thr				
	260	265	270	
ctt atg gtg atg tat gtg agc cca aca tca ggg aac cca gca gga atg				864
Leu Met Val Met Tyr Val Ser Pro Thr Ser Gly Asn Pro Ala Gly Met				
	275	280	285	
cag aag atc atc act ctg gta tac aca gca atg act cca ttc tta aat				912
Gln Lys Ile Ile Thr Leu Val Tyr Thr Ala Met Thr Pro Phe Leu Asn				
	290	295	300	
ccc ctt atc tat agt ctt cga aac aaa gac atg aaa gat gct cta aag				960
Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Asp Ala Leu Lys				
	305	310	315	320
aga gtc ctg ggg tta aca gtt agc caa aac tga				993
Arg Val Leu Gly Leu Thr Val Ser Gln Asn				
	325	330		
<210>	216			
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<212>	PRT			
<213>	Homo Sapiens			
<400>	216			
Met Phe Phe Ile Ile His Ser Leu Val Thr Ser Val Phe Leu Thr Ala				
1	5	10	15	
Leu Gly Pro Gln Asn Arg Thr Met His Phe Val Thr Glu Phe Val Leu				
	20	25	30	
Leu Gly Phe His Gly Gln Arg Glu Met Gln Ser Cys Phe Phe Ser Phe				
	35	40	45	
Ile Leu Val Leu Tyr Leu Leu Thr Leu Leu Gly Asn Gly Ala Ile Val				
	50	55	60	
Cys Ala Val Lys Leu Asp Arg Arg Leu His Thr Pro Met Tyr Ile Leu				
	65	70	75	80
Leu Gly Asn Phe Ala Phe Leu Glu Ile Trp Tyr Ile Ser Ser Thr Val				
	85	90	95	
Pro Asn Met Leu Val Asn Ile Leu Ser Glu Ile Lys Thr Ile Ser Phe				
	100	105	110	
Ser Gly Cys Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly Thr Thr				
	115	120	125	

Glu Cys Phe Phe Leu Ser Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile
 130 135 140

Cys Arg Pro Leu His Tyr Pro Ser Ile Met Thr Gly Lys Phe Cys Ile
 145 150 155 160

Ile Leu Val Cys Val Cys Trp Val Gly Gly Phe Leu Cys Tyr Pro Val
 165 170 175

Pro Ile Val Leu Ile Ser Gln Leu Pro Phe Cys Gly Pro Asn Ile Ile
 180 185 190

Asp His Leu Val Cys Asp Pro Gly Pro Leu Phe Ala Leu Ala Cys Ile
 195 200 205

Ser Ala Pro Ser Thr Glu Leu Ile Cys Tyr Thr Phe Asn Ser Met Ile
 210 215 220

Ile Phe Gly Pro Phe Leu Ser Ile Leu Gly Ser Tyr Thr Leu Val Ile
 225 230 235 240

Arg Ala Val Leu Cys Ile Pro Ser Gly Ala Gly Arg Thr Lys Ala Phe
 245 250 255

Ser Thr Cys Gly Ser His Leu Met Val Val Ser Leu Phe Tyr Gly Thr
 260 265 270

Leu Met Val Met Tyr Val Ser Pro Thr Ser Gly Asn Pro Ala Gly Met
 275 280 285

Gln Lys Ile Ile Thr Leu Val Tyr Thr Ala Met Thr Pro Phe Leu Asn
 290 295 300

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Asp Ala Leu Lys
 305 310 315 320

Arg Val Leu Gly Leu Thr Val Ser Gln Asn
 325 330

<210> 217
 <211> 975
 <212> DNA
 <213> Homo Sapiens

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 <222> (1) .. (972)

<223>

<400> 217

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Met Ser Phe Phe Phe Val Asp Leu Arg Pro Met Asn Arg Ser Ala Thr	
1 5 10 15	
cac atc gtg aca gag ttt att ctc ctg gga ttc cct ggt tgc tgg aag	96
His Ile Val Thr Glu Phe Ile Leu Leu Gly Phe Pro Gly Cys Trp Lys	
20 25 30	
att cag att ttc ctc ttc tca ttg ttt ttg gtg att tat gtc ttg acc	144
Ile Gln Ile Phe Leu Phe Ser Leu Phe Leu Val Ile Tyr Val Leu Thr	
35 40 45	
ttg ctg gga aat gga gcc atc atc tat gca gtg aga tgc aac cca cta	192
Leu Leu Gly Asn Gly Ala Ile Ile Tyr Ala Val Arg Cys Asn Pro Leu	
50 55 60	
cta cac acc ccc atg tac ttt ctg ctg gga aat ttt gcc ttc ctt gag	240
Leu His Thr Pro Met Tyr Phe Leu Leu Gly Asn Phe Ala Phe Leu Glu	
65 70 75 80	
atc tgg tat gtg tcc tcc act att cct aac atg cta gtc aac att ctc	288
Ile Trp Tyr Val Ser Ser Thr Ile Pro Asn Met Leu Val Asn Ile Leu	
85 90 95	
tcc aag acc aag gcc atc tca ttt tct ggg tgc ttc ctc cag ttc tat	336
Ser Lys Thr Lys Ala Ile Ser Phe Ser Gly Cys Phe Leu Gln Phe Tyr	
100 105 110	
ttc ttc ttt tca ctg gga aca act gaa tgt ctc ttt ctg gca gta atg	384
Phe Phe Phe Ser Leu Gly Thr Thr Glu Cys Leu Phe Leu Ala Val Met	
115 120 125	
gct tat gat cga tac ctg gcc atc tgc cac cca ctg cag tac cct gcc	432
Ala Tyr Asp Arg Tyr Leu Ala Ile Cys His Pro Leu Gln Tyr Pro Ala	
130 135 140	
atc atg act gta agg ttc tgt ggt aag ctg gtg tct ttc tgt tgg ctt	480
Ile Met Thr Val Arg Phe Cys Gly Lys Leu Val Ser Phe Cys Trp Leu	
145 150 155 160	
att gga ttc ctt gga tac cca att ccc att ttc tac atc tcc caa ctc	528
Ile Gly Phe Leu Gly Tyr Pro Ile Pro Ile Phe Tyr Ile Ser Gln Leu	
165 170 175	
ccc ttc tgt ggt cct aat atc att gat cac ttc ctg tgt gac atg gac	576
Pro Phe Cys Gly Pro Asn Ile Ile Asp His Phe Leu Cys Asp Met Asp	
180 185 190	
cca ttg atg gct cta tcc tgt gcc cca gct ccc ata act gaa tgt att	624
Pro Leu Met Ala Leu Ser Cys Ala Pro Ala Pro Ile Thr Glu Cys Ile	
195 200 205	
ttc tat act cag agc tcc ctt gtc ctc ttt ttc act agt atg tac att	672
Phe Tyr Thr Gln Ser Ser Leu Val Leu Phe Phe Thr Ser Met Tyr Ile	
210 215 220	
ctt cga tcc tat atc ctg tta cta aca gct gtt ttt cag gtc cct tct	720

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Leu Arg Ser Tyr Ile Leu Leu Leu Thr Ala Val Phe Gln Val Pro Ser
 225 230 235 240
 gca gct ggt cgg aga aaa gcc ttc tct acc tgt ggt tct cat ttg gtt 768
 Ala Ala Gly Arg Arg Lys Ala Phe Ser Thr Cys Gly Ser His Leu Val
 245 250 255
 gtg gta tct ctt ttc tat ggg aca gtc atg gta atg tat gta agt cct 816
 Val Val Ser Leu Phe Tyr Gly Thr Val Met Val Met Tyr Val Ser Pro
 260 265 270
 aca tat ggg atc cca act tta ttg cag aag atc ctc aca ctg gta tat 864
 Thr Tyr Gly Ile Pro Thr Leu Leu Gln Lys Ile Leu Thr Leu Val Tyr
 275 280 285
 tca gta acg act cct ctt ttt aat cct ctg atc tat act ctt cgt aat 912
 Ser Val Thr Thr Pro Leu Phe Asn Pro Leu Ile Tyr Thr Leu Arg Asn
 290 295 300
 aag gac atg aaa ctc gct ctg aga aat gtc ctg ttt gga atg aga att 960
 Lys Asp Met Lys Leu Ala Leu Arg Asn Val Leu Phe Gly Met Arg Ile
 305 310 315 320
 cgt caa aat tcg tga 975
 Arg Gln Asn Ser

<210> 218
 <211> 324
 <212> PRT
 <213> Homo Sapiens

<400> 218

Met Ser Phe Phe Phe Val Asp Leu Arg Pro Met Asn Arg Ser Ala Thr
 1 5 10 15

His Ile Val Thr Glu Phe Ile Leu Leu Gly Phe Pro Gly Cys Trp Lys
 20 25 30

Ile Gln Ile Phe Leu Phe Ser Leu Phe Leu Val Ile Tyr Val Leu Thr
 35 40 45

Leu Leu Gly Asn Gly Ala Ile Ile Tyr Ala Val Arg Cys Asn Pro Leu
 50 55 60

Leu His Thr Pro Met Tyr Phe Leu Leu Gly Asn Phe Ala Phe Leu Glu
 65 70 75 80

Ile Trp Tyr Val Ser Ser Thr Ile Pro Asn Met Leu Val Asn Ile Leu
 85 90 95

Ser Lys Thr Lys Ala Ile Ser Phe Ser Gly Cys Phe Leu Gln Phe Tyr
 100 105 110

Phe Phe Phe Ser Leu Gly Thr Thr Glu Cys Leu Phe Leu Ala Val Met
 115 120 125

Ala Tyr Asp Arg Tyr Leu Ala Ile Cys His Pro Leu Gln Tyr Pro Ala
 130 135 140

Ile Met Thr Val Arg Phe Cys Gly Lys Leu Val Ser Phe Cys Trp Leu
 145 150 155 160

Ile Gly Phe Leu Gly Tyr Pro Ile Pro Ile Phe Tyr Ile Ser Gln Leu
 165 170 175

Pro Phe Cys Gly Pro Asn Ile Ile Asp His Phe Leu Cys Asp Met Asp
 180 185 190

Pro Leu Met Ala Leu Ser Cys Ala Pro Ala Pro Ile Thr Glu Cys Ile
 195 200 205

Phe Tyr Thr Gln Ser Ser Leu Val Leu Phe Phe Thr Ser Met Tyr Ile
 210 215 220

Leu Arg Ser Tyr Ile Leu Leu Leu Thr Ala Val Phe Gln Val Pro Ser
 225 230 235 240

Ala Ala Gly Arg Arg Lys Ala Phe Ser Thr Cys Gly Ser His Leu Val
 245 250 255

Val Val Ser Leu Phe Tyr Gly Thr Val Met Val Met Tyr Val Ser Pro
 260 265 270

Thr Tyr Gly Ile Pro Thr Leu Leu Gln Lys Ile Leu Thr Leu Val Tyr
 275 280 285

Ser Val Thr Thr Pro Leu Phe Asn Pro Leu Ile Tyr Thr Leu Arg Asn
 290 295 300

Lys Asp Met Lys Leu Ala Leu Arg Asn Val Leu Phe Gly Met Arg Ile
 305 310 315 320

Arg Gln Asn Ser

<210> 219

<211> 933

<212> DNA

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<213> Homo Sapiens

<220>

<221> CDS

<222> (1)..(930)

<223>

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 1 5 10

ttc act gaa tat cct gaa tgg gca ctc cct ctc ttc ctc ttg tta tta 96
 Phe Thr Glu Tyr Pro Glu Trp Ala Leu Pro Leu Phe Leu Leu Leu 30
 20 25

ttt atg tat ctc atc acc gta ttg ggg aac tta gag atg att att ctg 144
 Phe Met Tyr Leu Ile Thr Val Leu Gly Asn Leu Glu Met Ile Ile Leu 45
 35 40

atc ctc atg gat cac cag ctc cac gct cca atg tat ttc ctt ctg agt 192
 Ile Leu Met Asp His Gln Leu His Ala Pro Met Tyr Phe Leu Leu Ser 60
 50 55

cac ctc gct ttc atg gac gtc tgc tac tca tct atc act gtc ccc cag 240
 His Leu Ala Phe Met Asp Val Cys Tyr Ser Ser Ile Thr Val Pro Gln 80
 65 70 75

atg ctg gca gtg ctg ctg gag cat ggg gca gct tta tct tac aca cgc 288
 Met Leu Ala Val Leu Leu Glu His Gly Ala Ala Leu Ser Tyr Thr Arg 95
 85 90

tgt gct gct cag ttc ttt ctg ttc acc ttc ttt ggt tcc atc gac tgc 336
 Cys Ala Ala Gln Phe Phe Leu Phe Thr Phe Phe Gly Ser Ile Asp Cys 110
 100 105

tac ctc ttg gcc ctc atg gcc tat gac cgc tac ttg gct gtg tgc cag 384
 Tyr Leu Leu Ala Leu Met Ala Tyr Asp Arg Tyr Leu Ala Val Cys Gln 125
 115 120

ccc ctg ctt tat gtc acc atc ctg aca cag cag gcc cgc ttg agt ctt 432
 Pro Leu Leu Tyr Val Thr Ile Leu Thr Gln Ala Arg Leu Ser Leu 140
 130 135

gtg gct ggg gct tac gtt gct ggt ctc atc agt gcc ttg gtg cgg aca 480
 Val Ala Gly Ala Tyr Val Ala Gly Leu Ile Ser Ala Leu Val Arg Thr 160
 145 150 155

gtc tca gcc ttc act ctc tcc ttc tgt gga acc agt gag att gac ttt 528
 Val Ser Ala Phe Thr Leu Ser Phe Cys Gly Thr Ser Glu Ile Asp Phe 175
 165 170

att ttc tgt gac ctc cct cct ctg tta aag ttg acc tgt ggg gag agc 576
 Ile Phe Cys Asp Leu Pro Pro Leu Leu Lys Leu Thr Cys Gly Glu Ser 190
 180 185

tac act caa gaa gtg ctg att att atg ttt gcc att ttt gtc atc cct 624
 Tyr Thr Gln Glu Val Leu Ile Ile Met Phe Ala Ile Phe Val Ile Pro 205
 195 200

gct tcc atg gtg gtg atc ttg gtg tcc tac ctg ttt atc atc gtg gcc 672
 Ala Ser Met Val Val Ile Leu Val Ser Tyr Leu Phe Ile Ile Val Ala
 210 215 220

 atc atg ggg atc cct gct gga agc cag gcc aag acc ttc tcc acc tgc 720
 Ile Met Gly Ile Pro Ala Gly Ser Gln Ala Lys Thr Phe Ser Thr Cys
 225 230 235 240

 acc tcc cac ctc act gct gtg tca ctc ttc ttt ggt acc ctc atc ttc 768
 Thr Ser His Leu Thr Ala Val Ser Leu Phe Phe Gly Thr Leu Ile Phe
 245 250 255

 atg tac ttg aga ggt aac tca gat cag tct tcg gag aag aat cgg gta 816
 Met Tyr Leu Arg Gly Asn Ser Asp Gln Ser Ser Glu Lys Asn Arg Val
 260 265 270

 gtg tct gtg ctt tac aca gag gtc atc ccc atg ttg aat ccc ctc atc 864
 Val Ser Val Leu Tyr Thr Glu Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285

 tac agc ctg agg aac aag gaa gtg aag gag gcc ctg aga aaa att ctc 912
 Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Leu Arg Lys Ile Leu
 290 295 300

 aat aga gcc aag ttg tcc taa 933
 Asn Arg Ala Lys Leu Ser
 305 310

<210> 220
 <211> 310
 <212> PRT
 <213> Homo Sapiens

<400> 220

Met Ala Glu Met Asn Leu Thr Leu Val Thr Glu Phe Leu Leu Ile Ala
1 5 10 15

Phe Thr Glu Tyr Pro Glu Trp Ala Leu Pro Leu Phe Leu Leu Leu Leu
20 25 30

Phe Met Tyr Leu Ile Thr Val Leu Gly Asn Leu Glu Met Ile Ile Leu
35 40 45

Ile Leu Met Asp His Gln Leu His Ala Pro Met Tyr Phe Leu Leu Ser
50 55 60

His Leu Ala Phe Met Asp Val Cys Tyr Ser Ser Ile Thr Val Pro Gln
65 70 75 80

Met Leu Ala Val Leu Leu Glu His Gly Ala Ala Leu Ser Tyr Thr Arg
85 90 95

Cys Ala Ala Gln Phe Phe Leu Phe Thr Phe Phe Gly Ser Ile Asp Cys

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100 105 110
 Tyr Leu Leu Ala Leu Met Ala Tyr Asp Arg Tyr Leu Ala Val Cys Gln
 115 120 125
 Pro Leu Leu Tyr Val Thr Ile Leu Thr Gln Gln Ala Arg Leu Ser Leu
 130 135 140
 Val Ala Gly Ala Tyr Val Ala Gly Leu Ile Ser Ala Leu Val Arg Thr
 145 150 155 160
 Val Ser Ala Phe Thr Leu Ser Phe Cys Gly Thr Ser Glu Ile Asp Phe
 165 170 175
 Ile Phe Cys Asp Leu Pro Pro Leu Leu Lys Leu Thr Cys Gly Glu Ser
 180 185 190
 Tyr Thr Gln Glu Val Leu Ile Ile Met Phe Ala Ile Phe Val Ile Pro
 195 200 205
 Ala Ser Met Val Val Ile Leu Val Ser Tyr Leu Phe Ile Ile Val Ala
 210 215 220
 Ile Met Gly Ile Pro Ala Gly Ser Gln Ala Lys Thr Phe Ser Thr Cys
 225 230 235 240
 Thr Ser His Leu Thr Ala Val Ser Leu Phe Phe Gly Thr Leu Ile Phe
 245 250 255
 Met Tyr Leu Arg Gly Asn Ser Asp Gln Ser Ser Glu Lys Asn Arg Val
 260 265 270
 Val Ser Val Leu Tyr Thr Glu Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285
 Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Leu Arg Lys Ile Leu
 290 295 300
 Asn Arg Ala Lys Leu Ser
 305 310

<210> 221
 <211> 936
 <212> DNA
 <213> Homo Sapiens
 <220>

<221> CDS

<222> (1) .. (933)

<223>

<400> 221

atg ggg act gga aat gac acc act gtg gta gag ttt act ctt ttg ggg	48
Met Gly Thr Gly Asn Asp Thr Thr Val Val Glu Phe Thr Leu Leu Gly	
1 5 10 15	
tta tct gag gat act aca gtt tgt gct att tta ttt ctt gtg ttt cta	96
Leu Ser Glu Asp Thr Thr Val Cys Ala Ile Leu Phe Leu Val Phe Leu	
20 25 30	
gga att tat gtt gtc acc tta atg ggt aat atc agc ata att gta ttg	144
Gly Ile Tyr Val Val Thr Leu Met Gly Asn Ile Ser Ile Ile Val Leu	
35 40 45	
atc aga aga agt cat cat ctt cat aca ccc atg tac att ttc ctc tgc	192
Ile Arg Arg Ser His His Leu His Thr Pro Met Tyr Ile Phe Leu Cys	
50 55 60	
cat ttg gcc ttt gta gac att ggg tac tcc tca tca gtc aca cct gtc	240
His Leu Ala Phe Val Asp Ile Gly Tyr Ser Ser Ser Val Thr Pro Val	
65 70 75 80	
atg ctc atg agc ttc cta agg aaa gaa acc tct ctc cct gtt gct ggt	288
Met Leu Met Ser Phe Leu Arg Lys Glu Thr Ser Leu Pro Val Ala Gly	
85 90 95	
tgt gtg gcc cag ctc tgt tct gta gtg acg ttt ggt acg gcc gag tgc	336
Cys Val Ala Gln Leu Cys Ser Val Val Thr Phe Gly Thr Ala Glu Cys	
100 105 110	
ttc ctg ctg gct gcc atg gcc tat gat cgc tat gtg gcc atc tgc tca	384
Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser	
115 120 125	
ccc ctg ctc tac tct acc tgc atg tcc cct gga gtc tgc atc atc tta	432
Pro Leu Leu Tyr Ser Thr Cys Met Ser Pro Gly Val Cys Ile Ile Leu	
130 135 140	
gtg ggc atg tcc tac ctg ggt gga tgt gtg aat gct tgg aca ttc att	480
Val Gly Met Ser Tyr Leu Gly Gly Cys Val Asn Ala Trp Thr Phe Ile	
145 150 155 160	
ggc tgc tta tta aga ctg tcc ttc tgt ggg cca aat aaa gtc aat cac	528
Gly Cys Leu Leu Arg Leu Ser Phe Cys Gly Pro Asn Lys Val Asn His	
165 170 175	
ttt ttc tgt gac tat tca cca ctt ttg aag ctt gct tgt tcc cat gat	576
Phe Phe Cys Asp Tyr Ser Pro Leu Leu Lys Leu Ala Cys Ser His Asp	
180 185 190	
ttt act ttt gaa ata att cca gct atc tct tct gga tct atc att gtg	624
Phe Thr Phe Glu Ile Ile Pro Ala Ile Ser Ser Gly Ser Ile Ile Val	
195 200 205	
gcc act gtg tgt gtc ata gcc ata tcc tac atc tat atc ctc atc acc	672
Ala Thr Val Cys Val Ile Ala Ile Ser Tyr Ile Tyr Ile Leu Ile Thr	
210 215 220	

atc ctg aag atg cac tcc acc aag ggc cgc cac aag gcc ttc tcc acc 720
 Ile Leu Lys Met His Ser Thr Lys Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240
 tgc acc tcc cac ctc act gca gtc act ctg ttc tat ggg acc att acc 768
 Cys Thr Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Thr Ile Thr
 245 250 255
 ttc att tat gtg atg ccc aag tcc agc tac tca act gac cag aac aag 816
 Phe Ile Tyr Val Met Pro Lys Ser Ser Tyr Ser Thr Asp Gln Asn Lys
 260 265 270
 gtg gtg tct gtg ttc tac acc gtg gtg att ccc atg ttg aac ccc ctg 864
 Val Val Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285
 atc tac agc ctc agg aac aag gag att aag ggg gct ctg aag aga gag 912
 Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Gly Ala Leu Lys Arg Glu
 290 295 300
 ctt aga ata aaa ata ttt tct tga 936
 Leu Arg Ile Lys Ile Phe Ser
 305 310

<210> 222
 <211> 311
 <212> PRT
 <213> Homo Sapiens

<400> 222

Met Gly Thr Gly Asn Asp Thr Thr Val Val Glu Phe Thr Leu Leu Gly
 1 5 10 15

Leu Ser Glu Asp Thr Thr Val Cys Ala Ile Leu Phe Leu Val Phe Leu
 20 25 30

Gly Ile Tyr Val Val Thr Leu Met Gly Asn Ile Ser Ile Ile Val Leu
 35 40 45

Ile Arg Arg Ser His His Leu His Thr Pro Met Tyr Ile Phe Leu Cys
 50 55 60

His Leu Ala Phe Val Asp Ile Gly Tyr Ser Ser Ser Val Thr Pro Val
 65 70 75 80

Met Leu Met Ser Phe Leu Arg Lys Glu Thr Ser Leu Pro Val Ala Gly
 85 90 95

Cys Val Ala Gln Leu Cys Ser Val Val Thr Phe Gly Thr Ala Glu Cys
 100 105 110

Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser
 115 120 125

Pro Leu Leu Tyr Ser Thr Cys Met Ser Pro Gly Val Cys Ile Ile Leu
 130 135 140

Val Gly Met Ser Tyr Leu Gly Gly Cys Val Asn Ala Trp Thr Phe Ile
 145 150 155 160

Gly Cys Leu Leu Arg Leu Ser Phe Cys Gly Pro Asn Lys Val Asn His
 165 170 175

Phe Phe Cys Asp Tyr Ser Pro Leu Leu Lys Leu Ala Cys Ser His Asp
 180 185 190

Phe Thr Phe Glu Ile Ile Pro Ala Ile Ser Ser Gly Ser Ile Ile Val
 195 200 205

Ala Thr Val Cys Val Ile Ala Ile Ser Tyr Ile Tyr Ile Leu Ile Thr
 210 215 220

Ile Leu Lys Met His Ser Thr Lys Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240

Cys Thr Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Thr Ile Thr
 245 250 255

Phe Ile Tyr Val Met Pro Lys Ser Ser Tyr Ser Thr Asp Gln Asn Lys
 260 265 270

Val Val Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Gly Ala Leu Lys Arg Glu
 290 295 300

Leu Arg Ile Lys Ile Phe Ser
 305 310

<210> 223
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

<400> 223
 atg tcc aac gcc agc ctc gtg aca gca ttc atc ctc aca ggc ctt ccc 48
 Met Ser Asn Ala Ser Leu Val Thr Ala Phe Ile Leu Thr Gly Leu Pro
 1 5 10 15
 cat gcc cca ggg ctg gac gcc ctc ctc ttt gga atc ttc ctg gtg gtt 96
 His Ala Pro Gly Leu Asp Ala Leu Leu Phe Gly Ile Phe Leu Val Val
 20 25 30
 tac gtg ctc act gtg ctg ggg aac ctc ctc atc ctg ctg gtg atc agg 144
 Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
 35 40 45
 gtg gat tct cac ctc cac acc ccc atg tac tac ttc ctc acc aac ctg 192
 Val Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Thr Asn Leu
 50 55 60
 tcc ttc att gac atg tgg ttc tcc act gtc acg gtg ccc aaa atg ctg 240
 Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Met Leu
 65 70 75 80
 atg acc ttg gtg tcc cca agc ggc agg gct atc tcc ttc cac agc tgc 288
 Met Thr Leu Val Ser Pro Ser Gly Arg Ala Ile Ser Phe His Ser Cys
 85 90 95
 gtg gct cag ctc tat ttt ttc cac ttc ctg ggg agc acc gag tgt ttc 336
 Val Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Ser Thr Glu Cys Phe
 100 105 110
 ctc tac aca gtc atg tcc tat gat cgc tac ttg gcc atc agt tac ccg 384
 Leu Tyr Thr Val Met Ser Tyr Asp Arg Tyr Leu Ala Ile Ser Tyr Pro
 115 120 125
 ctc agg tac acc agc atg atg agt ggg agc agg tgt gcc ctc ctg gcc 432
 Leu Arg Tyr Thr Ser Met Met Ser Gly Ser Arg Cys Ala Leu Leu Ala
 130 135 140
 acc ggc act tgg ctc agt ggc tct ctg cac tct gct gtc cag acc ata 480
 Thr Gly Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Thr Ile
 145 150 155 160
 ttg act ttc cat ttg ccc tac tgt gga ccc aac cag atc cag cac tac 528
 Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Gln Ile Gln His Tyr
 165 170 175
 ttc tgt gac gca ccg ccc atc ctg aaa ctg gcc tgt gca gac acc tca 576
 Phe Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser
 180 185 190
 gcc aac gtg atg gtc atc ttt gtg gac att ggg ata gtg gcc tca ggc 624
 Ala Asn Val Met Val Ile Phe Val Asp Ile Gly Ile Val Ala Ser Gly
 195 200 205
 tgc ttt gtc ctg ata gtg ctg tcc tat gtg tcc atc gtc tgt tcc atc 672
 Cys Phe Val Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile
 210 215 220
 ctg cgg atc cgc acc tca gat ggg agg cgc aga gcc ttt cag acc tgt 720
 Leu Arg Ile Arg Thr Ser Asp Gly Arg Arg Arg Ala Phe Gln Thr Cys

225	230	235	240	
gcc tcc cac tgt att gtg gtc ctt tgc ttc ttt gtt ccc tgt gtt gtc				768
Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Val Pro Cys Val Val				
	245	250	255	
att tat ctg agg cca ggc tcc atg gat gcc atg gat gga gtt gtg gcc				816
Ile Tyr Leu Arg Pro Gly Ser Met Asp Ala Met Asp Gly Val Val Ala				
	260	265	270	
att ttc tac act gtg ctg acg ccc ctt ctc aac cct gtt gtg tac acc				864
Ile Phe Tyr Thr Val Leu Thr Pro Leu Leu Asn Pro Val Val Tyr Thr				
	275	280	285	
ctg aga aac aag gag gtg aag aaa gct gtg ttg aaa ctt aga gac aaa				912
Leu Arg Asn Lys Glu Val Lys Lys Ala Val Leu Lys Leu Arg Asp Lys				
	290	295	300	
gta gca cat cct cag agg aaa taa				936
Val Ala His Pro Gln Arg Lys				
	305	310		
<210>	224			
<211>	311			
<212>	PRT			
<213>	Homo Sapiens			
<400>	224			
Met Ser Asn Ala Ser Leu Val Thr Ala Phe Ile Leu Thr Gly Leu Pro				
1	5	10	15	
His Ala Pro Gly Leu Asp Ala Leu Leu Phe Gly Ile Phe Leu Val Val				
	20	25	30	
Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg				
	35	40	45	
Val Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Thr Asn Leu				
	50	55	60	
Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Met Leu				
	65	70	75	80
Met Thr Leu Val Ser Pro Ser Gly Arg Ala Ile Ser Phe His Ser Cys				
	85	90	95	
Val Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Ser Thr Glu Cys Phe				
	100	105	110	
Leu Tyr Thr Val Met Ser Tyr Asp Arg Tyr Leu Ala Ile Ser Tyr Pro				
	115	120	125	

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Leu Arg Tyr Thr Ser Met Met Ser Gly Ser Arg Cys Ala Leu Leu Ala
 130 135 140

Thr Gly Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Thr Ile
 145 150 155 160

Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Gln Ile Gln His Tyr
 165 170 175

Phe Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser
 180 185 190

Ala Asn Val Met Val Ile Phe Val Asp Ile Gly Ile Val Ala Ser Gly
 195 200 205

Cys Phe Val Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile
 210 215 220

Leu Arg Ile Arg Thr Ser Asp Gly Arg Arg Arg Ala Phe Gln Thr Cys
 225 230 235 240

Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Val Pro Cys Val Val
 245 250 255

Ile Tyr Leu Arg Pro Gly Ser Met Asp Ala Met Asp Gly Val Val Ala
 260 265 270

Ile Phe Tyr Thr Val Leu Thr Pro Leu Leu Asn Pro Val Val Tyr Thr
 275 280 285

Leu Arg Asn Lys Glu Val Lys Lys Ala Val Leu Lys Leu Arg Asp Lys
 290 295 300

Val Ala His Pro Gln Arg Lys
 305 310

<210> 225
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (933)
 <223>

<220>

<221> misc_feature
 <222> (756)..(757)
 <223> Uncertain nucleotide

<400> 225
 atg tcc aag acc agc ctc gtg aca gcg ttc atc ctc acg ggc ctt ccc 48
 Met Ser Lys Thr Ser Leu Val Thr Ala Phe Ile Leu Thr Gly Leu Pro
 1 5 10 15

cat gcc cca ggg ctg gac gcc cca ctc ttt gga atc ttc ctg gtg gtt 96
 His Ala Pro Gly Leu Asp Ala Pro Leu Phe Gly Ile Phe Leu Val Val
 20 25 30

tac gtg ctc act gtg ctg ggg aac ctc ctc atc ctg ctg gtg atc agg 144
 Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
 35 40 45

gtg gat tct cac ctc cac acc ccc atg tac tac ttc ctc acc aac ctg 192
 Val Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Thr Asn Leu
 50 55 60

tcc ttc att gac atg tgg ttc tcc act gtc acg gtg ccc aaa atg ctg 240
 Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Met Leu
 65 70 75 80

atg acc ttg gtg tcc cca agc ggc agg gct atc tcc ttc cac agc tgc 288
 Met Thr Leu Val Ser Pro Ser Gly Arg Ala Ile Ser Phe His Ser Cys
 85 90 95

gtg gct cag ctc tat ttt ttc cac ttc ctg ggg agc acc gag tgt ttc 336
 Val Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Ser Thr Glu Cys Phe
 100 105 110

ctc tac aca gtc atg tcc tat gat cgc tac ttg gcc atc agt tac ccg 384
 Leu Tyr Thr Val Met Ser Tyr Asp Arg Tyr Leu Ala Ile Ser Tyr Pro
 115 120 125

ctc agg tac acc agc atg atg agt ggg agc aga tgt gcc ctc ctg gcc 432
 Leu Arg Tyr Thr Ser Met Met Ser Gly Ser Arg Cys Ala Leu Leu Ala
 130 135 140

acc agc act tgg ctc agt ggc tct ctg cac tct gct gtc cag acc ata 480
 Thr Ser Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Thr Ile
 145 150 155 160

ttg act ttc cat ttg ccc tac tgt gga ccc aac cag atc cag cac tat 528
 Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Gln Ile Gln His Tyr
 165 170 175

ttg tgt gat gca ccg ccc atc ctg aaa ctg gcc tgt gca gac acc tca 576
 Leu Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser
 180 185 190

gcc aac gag atg gtc atc ttt gtg gac att ggg cta gtg gcc tcg ggc 624
 Ala Asn Glu Met Val Ile Phe Val Asp Ile Gly Leu Val Ala Ser Gly
 195 200 205

tgc ttt ctc ctg ata gtg ctg tct tat gtg tcc atc gtc tgt tcc atc 672
 Cys Phe Leu Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile
 210 215 220

ctg cgg atc cac acc tca gag ggg agg cac aga gcc ttt cag acc tgt 720
 Leu Arg Ile His Thr Ser Glu Gly Arg His Arg Ala Phe Gln Thr Cys
 225 230 235 240
 gcc tcc cac tgc atc gtg gtc ctt tgc ttt ttt gtn ncc tgt gtt ttc 768
 Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Val Xaa Cys Val Phe
 245 250 255
 att tac ctg aga cca ggc tcc agg gac gtc gtg gat gga gtt gtg gcc 816
 Ile Tyr Leu Arg Pro Gly Ser Arg Asp Val Val Asp Gly Val Val Ala
 260 265 270
 att ttc tac act gtg ctg aca ccc ctt ctc aac cct gtt gtg tac acc 864
 Ile Phe Tyr Thr Val Leu Thr Pro Leu Leu Asn Pro Val Val Tyr Thr
 275 280 285
 ctg aga aac aag gag gtg aag aaa gct gtg ttg aaa ctg aga gac aaa 912
 Leu Arg Asn Lys Glu Val Lys Lys Ala Val Leu Lys Leu Arg Asp Lys
 290 295 300
 gta gca cat tct cag gga gaa taa 936
 Val Ala His Ser Gln Gly Glu
 305 310

<210> 226

<211> 311

<212> PRT

<213> Homo Sapiens

<220>

<221> misc_feature

<222> (253)..(253)

<223> The 'Xaa' at location 253 stands for Thr, Ala, Pro, or Ser.

<220>

<221> misc_feature

<222> (756)..(757)

<223> Uncertain nucleotide

<400> 226

Met Ser Lys Thr Ser Leu Val Thr Ala Phe Ile Leu Thr Gly Leu Pro
 1 5 10 15

His Ala Pro Gly Leu Asp Ala Pro Leu Phe Gly Ile Phe Leu Val Val
 20 25 30

Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
 35 40 45

Val Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Thr Asn Leu
 50 55 60

Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Met Leu
 65 70 75 80

Met Thr Leu Val Ser Pro Ser Gly Arg Ala Ile Ser Phe His Ser Cys
85 90 95

Val Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Ser Thr Glu Cys Phe
100 105 110

Leu Tyr Thr Val Met Ser Tyr Asp Arg Tyr Leu Ala Ile Ser Tyr Pro
115 120 125

Leu Arg Tyr Thr Ser Met Met Ser Gly Ser Arg Cys Ala Leu Leu Ala
130 135 140

Thr Ser Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Thr Ile
145 150 155 160

Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Gln Ile Gln His Tyr
165 170 175

Leu Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser
180 185 190

Ala Asn Glu Met Val Ile Phe Val Asp Ile Gly Leu Val Ala Ser Gly
195 200 205

Cys Phe Leu Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile
210 215 220

Leu Arg Ile His Thr Ser Glu Gly Arg His Arg Ala Phe Gln Thr Cys
225 230 235 240

Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Val Xaa Cys Val Phe
245 250 255

Ile Tyr Leu Arg Pro Gly Ser Arg Asp Val Val Asp Gly Val Val Ala
260 265 270

Ile Phe Tyr Thr Val Leu Thr Pro Leu Leu Asn Pro Val Val Tyr Thr
275 280 285

Leu Arg Asn Lys Glu Val Lys Lys Ala Val Leu Lys Leu Arg Asp Lys
290 295 300

Val Ala His Ser Gln Gly Glu
305 310

<210> 227
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

<400> 227
 atg tcc aac gcc agc cta ctg aca gcg ttc atc ctc atg ggc ctt ccc 48
 Met Ser Asn Ala Ser Leu Leu Thr Ala Phe Ile Leu Met Gly Leu Pro
 1 5 10 15
 cat gcc cca gcg ctg gac gcc ccc ctc ttt gga gtc ttc ctg gtg gtt 96
 His Ala Pro Ala Leu Asp Ala Pro Leu Phe Gly Val Phe Leu Val Val
 20 25 30
 tac gtg ctc act gtg ctg ggg aac ctc ctc atc ctg ctg gtg atc agg 144
 Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
 35 40 45
 gtg gat tct cac ctc cac acc acc atg tac tac ttc ctc acc aac ctg 192
 Val Asp Ser His Leu His Thr Thr Met Tyr Tyr Phe Leu Thr Asn Leu
 50 55 60
 tcg ttc att gac atg tgg ttc tcc act gtc acg gtg ccc aaa ttg ctg 240
 Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Leu Leu
 65 70 75 80
 atg act ttg gtg ttc cca agt ggc agg gct atc tcc ttc cac agc tgc 288
 Met Thr Leu Val Phe Pro Ser Gly Arg Ala Ile Ser Phe His Ser Cys
 85 90 95
 atg gct cag ctc tat ttc ttt cac ttc cta ggg ggc acc gag tgt ttc 336
 Met Ala Gln Leu Tyr Phe Phe His Phe Leu Gly Gly Thr Glu Cys Phe
 100 105 110
 ctc tac agg gtc atg tcc tgt gat cgc tac ctg gcc atc agt tac ccg 384
 Leu Tyr Arg Val Met Ser Cys Asp Arg Tyr Leu Ala Ile Ser Tyr Pro
 115 120 125
 ctc agg tac acc agc atg atg act ggg cgc tcg tgt act ctt ctg gcc 432
 Leu Arg Tyr Thr Ser Met Met Thr Gly Arg Ser Cys Thr Leu Leu Ala
 130 135 140
 acc agc act tgg ctc agt ggc tct ctg cac tct gct gtc cag gcc ata 480
 Thr Ser Thr Trp Leu Ser Gly Ser Leu His Ser Ala Val Gln Ala Ile
 145 150 155 160
 ttg act ttc cat ttg ccc tac tgt gga ccc aac tgg atc cag cac tat 528
 Leu Thr Phe His Leu Pro Tyr Cys Gly Pro Asn Trp Ile Gln His Tyr
 165 170 175
 ttg tgt gat gca ccg ccc atc ctg aaa ctg gcc tgt gca gac acc tca 576
 Leu Cys Asp Ala Pro Pro Ile Leu Lys Leu Ala Cys Ala Asp Thr Ser
 180 185 190

gcc ata gag act gtc att ttt gtg act gtt gga ata gtg gcc tcg ggc 624
 Ala Ile Glu Thr Val Ile Phe Val Thr Val Gly Ile Val Ala Ser Gly
 195 200 205

tgc ttt gtc ctg ata gtg ctg tcc tat gtg tcc atc gtc tgt tcc atc 672
 Cys Phe Val Leu Ile Val Leu Ser Tyr Val Ser Ile Val Cys Ser Ile
 210 215 220

ctg cgg atc cgc acc tca gag ggg aag cac aga gcc ttt cag acc tgt 720
 Leu Arg Ile Arg Thr Ser Glu Gly Lys His Arg Ala Phe Gln Thr Cys
 225 230 235 240

gcc tcc cac tgt atc gtg gtc ctt tgc ttc ttt ggc cct ggt ctt ttc 768
 Ala Ser His Cys Ile Val Val Leu Cys Phe Phe Gly Pro Gly Leu Phe
 245 250 255

att tac ctg agg cca ggc tcc agg aaa gct gtg gat gga gtt gtg gcc 816
 Ile Tyr Leu Arg Pro Gly Ser Arg Lys Ala Val Asp Gly Val Val Ala
 260 265 270

gtt ttc tac act gtg ctg acg ccc ctt ctc aac cct gtt gtg tac acc 864
 Val Phe Tyr Thr Val Leu Thr Pro Leu Leu Asn Pro Val Val Tyr Thr
 275 280 285

ctg agg aac aag gag gtg aag aaa gct ctg ttg aag ctg aaa gac aaa 912
 Leu Arg Asn Lys Glu Val Lys Lys Ala Leu Leu Lys Leu Lys Asp Lys
 290 295 300

gta gca cat tct cag agc aaa tag 936
 Val Ala His Ser Gln Ser Lys
 305 310

<210> 228
 <211> 311
 <212> PRT
 <213> Homo Sapiens

<400> 228

Met Ser Asn Ala Ser Leu Leu Thr Ala Phe Ile Leu Met Gly Leu Pro
 1 5 10 15

His Ala Pro Ala Leu Asp Ala Pro Leu Phe Gly Val Phe Leu Val Val
 20 25 30

Tyr Val Leu Thr Val Leu Gly Asn Leu Leu Ile Leu Leu Val Ile Arg
 35 40 45

Val Asp Ser His Leu His Thr Thr Met Tyr Tyr Phe Leu Thr Asn Leu
 50 55 60

Ser Phe Ile Asp Met Trp Phe Ser Thr Val Thr Val Pro Lys Leu Leu
 65 70 75 80

Met Thr Leu Val Phe Pro Ser Gly Arg Ala Ile Ser Phe His Ser Cys

$\langle 210 \rangle$	229
$\langle 211 \rangle$	933

<212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(930)
 <223>

<400> 229
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 Met Asp Lys Glu Asn Ser Ser Met Val Thr Glu Phe Ile Phe Met Gly
 1 5 10 15
 atc acc cag gac cct cag atg gag atc atc ttc ttc gtg gtc ttc ctc 96
 Ile Thr Gln Asp Pro Gln Met Glu Ile Ile Phe Phe Val Val Phe Leu
 20 25 30
 ata gtt tac ctg gtt aat gta gtg ggg aat att ggt atg att atc ctg 144
 Ile Val Tyr Leu Val Asn Val Val Gly Asn Ile Gly Met Ile Ile Leu
 35 40 45
 att aca aca gac act cag ctt cac aca ccc atg tat ttt ttc ctc tgc 192
 Ile Thr Thr Asp Thr Gln Leu His Thr Pro Met Tyr Phe Phe Leu Cys
 50 55 60
 aac ctc tcc ttt gtt gac ctg ggc tac tcc tca gcc att gcc ccc agg 240
 Asn Leu Ser Phe Val Asp Leu Gly Tyr Ser Ser Ala Ile Ala Pro Arg
 65 70 75 80
 atg ctg gct gac ttc cta aca aat cac aaa gtt atc tcc ttc tcc agc 288
 Met Leu Ala Asp Phe Leu Thr Asn His Lys Val Ile Ser Phe Ser Ser
 85 90 95
 tgt gcc acc cag ttt gct ttt ttt gta ggt ttt gtg gat gct gag tgc 336
 Cys Ala Thr Gln Phe Ala Phe Phe Val Gly Phe Val Asp Ala Glu Cys
 100 105 110
 tat gtc ctg gca gcc atg gcc tat ggt cgt ttt gtg gcc att tgt cga 384
 Tyr Val Leu Ala Ala Met Ala Tyr Gly Arg Phe Val Ala Ile Cys Arg
 115 120 125
 ccc ctc cac tat agc acc ttc atg tcc aag cag gtc tgc ttg gct ctc 432
 Pro Leu His Tyr Ser Thr Phe Met Ser Lys Gln Val Cys Leu Ala Leu
 130 135 140
 atg ctg ggc tct tac ctg gct ggt cta gtg agt tta gta gcc cac act 480
 Met Leu Gly Ser Tyr Leu Ala Gly Leu Val Ser Leu Val Ala His Thr
 145 150 155 160
 acc ctc acc ttc agc ctg agt tac tgt ggt tcc aat atc atc aat cat 528
 Thr Leu Thr Phe Ser Leu Ser Tyr Cys Gly Ser Asn Ile Ile Asn His
 165 170 175
 ttc ttc tgc gaa atc cca cca ctc ttg gcc ctc tct tgc tca gac acc 576
 Phe Phe Cys Glu Ile Pro Pro Leu Leu Ala Leu Ser Cys Ser Asp Thr
 180 185 190
 tac atc agt gag atc ttg ctc ttc agt ctg tgt ggc ttc att gaa ttc 624
 Tyr Ile Ser Glu Ile Leu Leu Phe Ser Leu Cys Gly Phe Ile Glu Phe
 195 200 205

agc acc atc ctc atc atc ttc atc tcc tat acc ttt atc ctt gtt gca 672
 Ser Thr Ile Leu Ile Ile Phe Ile Ser Tyr Thr Phe Ile Leu Val Ala
 210 215 220
 atc atc aga atg cgt tca gct gaa ggc cgc ctt aag gct ttc tcc acc 720
 Ile Ile Arg Met Arg Ser Ala Glu Gly Arg Leu Lys Ala Phe Ser Thr
 225 230 235 240
 tgc ggg tct cac ctt act ggc atc acc ctc ttc tat ggc aca gtc atg 768
 Cys Gly Ser His Leu Thr Gly Ile Thr Leu Phe Tyr Gly Thr Val Met
 245 250 255
 ttt atg tac ctg agg cca aca tcc agc tac tcc ctg gac caa gac aag 816
 Phe Met Tyr Leu Arg Pro Thr Ser Ser Tyr Ser Leu Asp Gln Asp Lys
 260 265 270
 tgg gcc tct gtg ttc tac acg gtt atc atc ccc atg tta aat ccc ttg 864
 Trp Ala Ser Val Phe Tyr Thr Val Ile Ile Pro Met Leu Asn Pro Leu
 275 280 285
 atc tac agt ttg cgg aac aag gat gtg aaa gct gct ttc aaa aag cta 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Ala Ala Phe Lys Lys Leu
 290 295 300
 att gga aaa aaa tct caa taa 933
 Ile Gly Lys Lys Ser Gln
 305 310

<210> 230
 <211> 310
 <212> PRT
 <213> Homo Sapiens

<400> 230

Met Asp Lys Glu Asn Ser Ser Met Val Thr Glu Phe Ile Phe Met Gly
 1 5 10 15

Ile Thr Gln Asp Pro Gln Met Glu Ile Ile Phe Phe Val Val Phe Leu
 20 25 30

Ile Val Tyr Leu Val Asn Val Val Gly Asn Ile Gly Met Ile Ile Leu
 35 40 45

Ile Thr Thr Asp Thr Gln Leu His Thr Pro Met Tyr Phe Phe Leu Cys
 50 55 60

Asn Leu Ser Phe Val Asp Leu Gly Tyr Ser Ser Ala Ile Ala Pro Arg
 65 70 75 80

Met Leu Ala Asp Phe Leu Thr Asn His Lys Val Ile Ser Phe Ser Ser
 85 90 95

Cys Ala Thr Gln Phe Ala Phe Phe Val Gly Phe Val Asp Ala Glu Cys
 100 105 110

Tyr Val Leu Ala Ala Met Ala Tyr Gly Arg Phe Val Ala Ile Cys Arg
 115 120 125

Pro Leu His Tyr Ser Thr Phe Met Ser Lys Gln Val Cys Leu Ala Leu
 130 135 140

Met Leu Gly Ser Tyr Leu Ala Gly Leu Val Ser Leu Val Ala His Thr
 145 150 155 160

Thr Leu Thr Phe Ser Leu Ser Tyr Cys Gly Ser Asn Ile Ile Asn His
 165 170 175

Phe Phe Cys Glu Ile Pro Pro Leu Leu Ala Leu Ser Cys Ser Asp Thr
 180 185 190

Tyr Ile Ser Glu Ile Leu Leu Phe Ser Leu Cys Gly Phe Ile Glu Phe
 195 200 205

Ser Thr Ile Leu Ile Ile Phe Ile Ser Tyr Thr Phe Ile Leu Val Ala
 210 215 220

Ile Ile Arg Met Arg Ser Ala Glu Gly Arg Leu Lys Ala Phe Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Thr Gly Ile Thr Leu Phe Tyr Gly Thr Val Met
 245 250 255

Phe Met Tyr Leu Arg Pro Thr Ser Ser Tyr Ser Leu Asp Gln Asp Lys
 260 265 270

Trp Ala Ser Val Phe Tyr Thr Val Ile Ile Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Ala Ala Phe Lys Lys Leu
 290 295 300

Ile Gly Lys Lys Ser Gln
 305 310

<210> 231

<211> 942

<212> DNA

<213> Homo Sapiens

<223>

att gtc atc agc tgt gtt atg att gtc ctc att tcc tac ctg tgt atc 672
Ile Val Ile Ser Cys Val Met Ile Val Leu Ile Ser Tyr Leu Cys Ile

210 215 220
 ttc att gcc gtc ttg aag atg cct tcg tta gag ggc agg cac aaa gcc 720
 Phe Ile Ala Val Leu Lys Met Pro Ser Leu Glu Gly Arg His Lys Ala
 225 230 235 240

 ttc tcc acc tgt gcc tct tac ctc atg gct gtc acc ata ttc ttt gga 768
 Phe Ser Thr Cys Ala Ser Tyr Leu Met Ala Val Thr Ile Phe Phe Gly
 245 250 255

 aca atc ctc ttc atg tac ttg cgc cct aca tct agc tac tca atg gag 816
 Thr Ile Leu Phe Met Tyr Leu Arg Pro Thr Ser Ser Tyr Ser Met Glu
 260 265 270

 caa gac aag gtt gtc tct gtc ttt tat aca gta ata atc cct gtg cta 864
 Gln Asp Lys Val Val Ser Val Phe Tyr Thr Val Ile Ile Pro Val Leu
 275 280 285

 aat ccc ctc atc tat agt tta aaa aat aag gat gta aaa aag gcc cta 912
 Asn Pro Leu Ile Tyr Ser Leu Lys Asn Lys Asp Val Lys Lys Ala Leu
 290 295 300

 aag aag atc tta tgg aaa cac atc ttg tag 942
 Lys Lys Ile Leu Trp Lys His Ile Leu
 305 310

 <210> 232
 <211> 313
 <212> PRT
 <213> Homo Sapiens

 <400> 232

 Met Lys Glu Val Arg Gly Arg Asn Gln Thr Glu Val Thr Glu Phe Leu
 1 5 10 15

 Leu Leu Gly Leu Ser Asp Asn Pro Asp Leu Gln Gly Val Leu Phe Ala
 20 25 30

 Leu Phe Leu Leu Ile Tyr Met Ala Asn Met Val Gly Asn Leu Gly Met
 35 40 45

 Ile Val Leu Ile Lys Ile Asp Leu Cys Leu His Thr Pro Met Tyr Phe
 50 55 60

 Phe Leu Ser Ser Leu Ser Phe Val Asp Ala Ser Tyr Ser Ser Ser Val
 65 70 75 80

 Thr Pro Lys Met Leu Val Asn Leu Met Ala Glu Asn Lys Ala Ile Ser
 85 90 95

 Phe His Gly Cys Ala Ala Gln Phe Tyr Phe Phe Gly Ser Phe Leu Gly
 100 105 110

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Thr Glu Cys Phe Leu Leu Ala Met Met Ala Tyr Asp Arg Tyr Ala Ala
 115 120 125

Ile Trp Asn Pro Leu Leu Tyr Pro Val Leu Val Ser Gly Arg Ile Cys
 130 135 140

Phe Leu Leu Ile Ala Thr Ser Phe Leu Ala Gly Cys Gly Asn Ala Ala
 145 150 155 160

Ile His Thr Gly Met Thr Phe Arg Leu Ser Phe Cys Gly Ser Asn Arg
 165 170 175

Ile Asn His Phe Tyr Cys Asp Thr Pro Pro Leu Leu Lys Leu Ser Cys
 180 185 190

Ser Asp Thr His Phe Asn Gly Ile Val Ile Met Ala Phe Ser Ser Phe
 195 200 205

Ile Val Ile Ser Cys Val Met Ile Val Leu Ile Ser Tyr Leu Cys Ile
 210 215 220

Phe Ile Ala Val Leu Lys Met Pro Ser Leu Glu Gly Arg His Lys Ala
 225 230 235 240

Phe Ser Thr Cys Ala Ser Tyr Leu Met Ala Val Thr Ile Phe Phe Gly
 245 250 255

Thr Ile Leu Phe Met Tyr Leu Arg Pro Thr Ser Ser Tyr Ser Met Glu
 260 265 270

Gln Asp Lys Val Val Ser Val Phe Tyr Thr Val Ile Ile Pro Val Leu
 275 280 285

Asn Pro Leu Ile Tyr Ser Leu Lys Asn Lys Asp Val Lys Lys Ala Leu
 290 295 300

Lys Lys Ile Leu Trp Lys His Ile Leu
 305 310

<210> 233
 <211> 948
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(945)

<223>

<400> 233

atg ttc tcc cca aac cac acc ata gtg aca gaa ttc att ctc ttg gga	48
Met Phe Ser Pro Asn His Thr Ile Val Thr Glu Phe Ile Leu Leu Gly	
1 5 10 15	
ctg aca gac gac cca gtg cta gag aag atc ctg ttt ggg gta ttc ctt	96
Leu Thr Asp Asp Pro Val Leu Glu Lys Ile Leu Phe Gly Val Phe Leu	
20 25 30	
gcg atc tac cta atc aca ctg gca ggc aac ctg tgc atg atc ctg ctg	144
Ala Ile Tyr Leu Ile Thr Leu Ala Gly Asn Leu Cys Met Ile Leu Leu	
35 40 45	
atc agg acc aat tcc cac ctg caa aca ccc atg tat ttc ttc ctt ggc	192
Ile Arg Thr Asn Ser His Leu Gln Thr Pro Met Tyr Phe Phe Leu Gly	
50 55 60	
cac ctc tcc ttt gta gac att tgc tat tct tcc aat gtt act cca aat	240
His Leu Ser Phe Val Asp Ile Cys Tyr Ser Ser Asn Val Thr Pro Asn	
65 70 75 80	
atg ctg cac aat ttc ctc tca gaa cag aag acc atc tcc tac gct gga	288
Met Leu His Asn Phe Leu Ser Glu Gln Lys Thr Ile Ser Tyr Ala Gly	
85 90 95	
tgc ttc aca cag tgt ctt ctc ttc atc gcc ctg gtg atc act gag ttt	336
Cys Phe Thr Gln Cys Leu Leu Phe Ile Ala Leu Val Ile Thr Glu Phe	
100 105 110	
tac atc ctt gct tca atg gca ttg gat cgc tat gta gcc att tgc agc	384
Tyr Ile Leu Ala Ser Met Ala Leu Asp Arg Tyr Val Ala Ile Cys Ser	
115 120 125	
cct ttg cat tac agt tcc agg atg tcc aag aac atc tgt gtc tgt ctg	432
Pro Leu His Tyr Ser Ser Arg Met Ser Lys Asn Ile Cys Val Cys Leu	
130 135 140	
gtc act atc cct tac atg tat ggg ttt ctt agt ggg ttc tct cag tca	480
Val Thr Ile Pro Tyr Met Tyr Gly Phe Leu Ser Gly Phe Ser Gln Ser	
145 150 155 160	
ctg cta acc ttt cac tta tcc ttc tgt ggc tcc ctt gaa atc aat cat	528
Leu Leu Thr Phe His Leu Ser Phe Cys Gly Ser Leu Glu Ile Asn His	
165 170 175	
ttc tac tgc gct gat cct cct ctt atc atg ctg gcc tgc tct gac acc	576
Phe Tyr Cys Ala Asp Pro Pro Leu Ile Met Leu Ala Cys Ser Asp Thr	
180 185 190	
cgt gtc aaa aag atg gca atg ttt gta gtt gca ggc ttt aat ctc tca	624
Arg Val Lys Lys Met Ala Met Phe Val Val Ala Gly Phe Asn Leu Ser	
195 200 205	
agc tct ctc ttc atc att ctt ctg tcc tat ctt ttc att ttt gca gcg	672
Ser Ser Leu Phe Ile Ile Leu Leu Ser Tyr Leu Phe Ile Phe Ala Ala	
210 215 220	
atc ttc agg atc cgt tct gct gaa ggc agg cac aaa gcc ttt tct acg	720

Ile Phe Arg Ile Arg Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240
 tgt gct tcc cac ctg aca ata gtc act ttg ttt tat gga acc ctc ttc 768
 Cys Ala Ser His Leu Thr Ile Val Thr Leu Phe Tyr Gly Thr Leu Phe
 245 250 255
 tgc atg tac gta agg cct cca tca gag aag tct gta gag gag tcc aaa 816
 Cys Met Tyr Val Arg Pro Pro Ser Glu Lys Ser Val Glu Glu Ser Lys
 260 265 270
 ata act gca gtc ttt tat act ttt ttg agc cca atg ctg aac cca ttg 864
 Ile Thr Ala Val Phe Tyr Thr Phe Leu Ser Pro Met Leu Asn Pro Leu
 275 280 285
 atc tat agc cta cgg aac aca gat gta atc ctt gcc atg caa caa atg 912
 Ile Tyr Ser Leu Arg Asn Thr Asp Val Ile Leu Ala Met Gln Gln Met
 290 295 300
 att agg gga aaa tcc ttt cat aaa att gca gtt tag 948
 Ile Arg Gly Lys Ser Phe His Lys Ile Ala Val
 305 310 315

<210> 234
 <211> 315
 <212> PRT
 <213> Homo Sapiens

<400> 234

Met Phe Ser Pro Asn His Thr Ile Val Thr Glu Phe Ile Leu Leu Gly
 1 5 10 15

Leu Thr Asp Asp Pro Val Leu Glu Lys Ile Leu Phe Gly Val Phe Leu
 20 25 30

Ala Ile Tyr Leu Ile Thr Leu Ala Gly Asn Leu Cys Met Ile Leu Leu
 35 40 45

Ile Arg Thr Asn Ser His Leu Gln Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60

His Leu Ser Phe Val Asp Ile Cys Tyr Ser Ser Asn Val Thr Pro Asn
 65 70 75 80

Met Leu His Asn Phe Leu Ser Glu Gln Lys Thr Ile Ser Tyr Ala Gly
 85 90 95

Cys Phe Thr Gln Cys Leu Leu Phe Ile Ala Leu Val Ile Thr Glu Phe
 100 105 110

Tyr Ile Leu Ala Ser Met Ala Leu Asp Arg Tyr Val Ala Ile Cys Ser
 115 120 125

Pro Leu His Tyr Ser Ser Arg Met Ser Lys Asn Ile Cys Val Cys Leu
 130 135 140

Val Thr Ile Pro Tyr Met Tyr Gly Phe Leu Ser Gly Phe Ser Gln Ser
 145 150 155 160

Leu Leu Thr Phe His Leu Ser Phe Cys Gly Ser Leu Glu Ile Asn His
 165 170 175

Phe Tyr Cys Ala Asp Pro Pro Leu Ile Met Leu Ala Cys Ser Asp Thr
 180 185 190

Arg Val Lys Lys Met Ala Met Phe Val Val Ala Gly Phe Asn Leu Ser
 195 200 205

Ser Ser Leu Phe Ile Ile Leu Leu Ser Tyr Leu Phe Ile Phe Ala Ala
 210 215 220

Ile Phe Arg Ile Arg Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Leu Thr Ile Val Thr Leu Phe Tyr Gly Thr Leu Phe
 245 250 255

Cys Met Tyr Val Arg Pro Pro Ser Glu Lys Ser Val Glu Glu Ser Lys
 260 265 270

Ile Thr Ala Val Phe Tyr Thr Phe Leu Ser Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Thr Asp Val Ile Leu Ala Met Gln Gln Met
 290 295 300

Ile Arg Gly Lys Ser Phe His Lys Ile Ala Val
 305 310 315

<210> 235
 <211> 918
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (912)
 <223>

<400> 235
 atg cag agg agc aat cat aca gtg act gag ttt ata ctg ctg ggc ttc 48
 Met Gln Arg Ser Asn His Thr Val Thr Glu Phe Ile Leu Leu Gly Phe
 1 5 10 15
 acc aca gac cca gga atg cag ctg ggc ctc ttc gtg gtg ttc ctg ggc 96
 Thr Thr Asp Pro Gly Met Gln Leu Gly Leu Phe Val Val Phe Leu Gly
 20 25 30
 gtg tac tct ctc act gtg gta gga aat agc acc ctc atc gtg ttg atc 144
 Val Tyr Ser Leu Thr Val Val Gly Asn Ser Thr Leu Ile Val Leu Ile
 35 40 45
 tgt aat gac tcc tgc ctc cac aca ccc atg tat ttt ttc act gga aat 192
 Cys Asn Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Thr Gly Asn
 50 55 60
 ctg tcg ttt ctg gat ctc tgg tat tct tct gtc tac acc cca aag atc 240
 Leu Ser Phe Leu Asp Leu Trp Tyr Ser Ser Val Tyr Thr Pro Lys Ile
 65 70 75 80
 cta gtg acc tgc atc tct gaa gac aaa agc atc tcc ttt gct ggc tgc 288
 Leu Val Thr Cys Ile Ser Glu Asp Lys Ser Ile Ser Phe Ala Gly Cys
 85 90 95
 ctg tgt cag ttc ttc ttc tct gca ggg ctg gcc tat agt gag tgc tac 336
 Leu Cys Gln Phe Phe Phe Ser Ala Gly Leu Ala Tyr Ser Glu Cys Tyr
 100 105 110
 ctg ctg gct gcc gtg gct tat gac cgc tac gtg gcc atc tcc aag ccc 384
 Leu Leu Ala Ala Val Ala Tyr Asp Arg Tyr Val Ala Ile Ser Lys Pro
 115 120 125
 ctg ctt tat gcc cag gcc atg tcc ata aag ctg tgt gca ttg ctg gta 432
 Leu Leu Tyr Ala Gln Ala Met Ser Ile Lys Leu Cys Ala Leu Leu Val
 130 135 140
 gca gtc tca tat tgt ggt ggc ttt att aac tct tca atc atc acc aag 480
 Ala Val Ser Tyr Cys Gly Gly Phe Ile Asn Ser Ser Ile Ile Thr Lys
 145 150 155 160
 aaa acg ttt tcc ttt aac ttc tgc cgt gaa aac atc att gat gac ttt 528
 Lys Thr Phe Ser Phe Asn Phe Cys Arg Glu Asn Ile Ile Asp Asp Phe
 165 170 175
 ttc tgt gat ttg ctt ccc ttg gtg gag ctg gcc tgt ggc gag aag ggc 576
 Phe Cys Asp Leu Leu Pro Leu Val Glu Leu Ala Cys Gly Glu Lys Gly
 180 185 190
 ggc tat aaa att atg atg tac ttc ctg ctg gcc tcc aat gtc atc tgc 624
 Gly Tyr Lys Ile Met Met Tyr Phe Leu Leu Ala Ser Asn Val Ile Cys
 195 200 205
 ccc gca gtg ctc atc ctg gcc tcc tac ctc ttt atc atc acc agt gtc 672
 Pro Ala Val Leu Ile Leu Ala Ser Tyr Leu Phe Ile Ile Thr Ser Val
 210 215 220
 ttg agg atc tcc tcc tcc aag ggc tac ctc aaa gcc ttc tcc aca tgc 720
 Leu Arg Ile Ser Ser Ser Lys Gly Tyr Leu Lys Ala Phe Ser Thr Cys
 225 230 235 240

tcc tcc cac ctg acc tct gtc act tta tac tat ggc tcc att ctc tac 768
Ser Ser His Leu Thr Ser Val Thr Leu Tyr Tyr Gly Ser Ile Leu Tyr
245 250 255

atc tac gct ctc ccc aga tct agc tat tct ttt gat atg gac aaa ata 816
Ile Tyr Ala Leu Pro Arg Ser Ser Tyr Ser Phe Asp Met Asp Lys Ile
260 265 270

ggt tct aca ttt tac act gtg gta ttc ccc atg ttg aat ctc atg atc 864
Val Ser Thr Phe Tyr Thr Val Val Phe Pro Met Leu Asn Leu Met Ile
275 280 285

tac	agc	cta	agg	aat	aag	gat	gtg	aaa	gag	gct	ctg	aaa	aaa	ctt	ctc	912
Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Lys	Glu	Ala	Leu	Lys	Lys	Leu	Leu	
	290					295					300					

ccataa 918

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<210> 236
<211> 304
<212> PRT
<213> Homo Sapiens
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<400> 236

Met Gln Arg Ser Asn His Thr Val Thr Glu Phe Ile Leu Leu Gly Phe
1 5 10 15

Thr Thr Asp Pro Gly Met Gln Leu Gly Leu Phe Val Val Phe Leu Gly
20 25 30

Val Tyr Ser Leu Thr Val Val Gly Asn Ser Thr Leu Ile Val Leu Ile
35 40 45

Cys Asn Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Thr Gly Asn
50 55 60

Leu Ser Phe Leu Asp Leu Trp Tyr Ser Ser Val Tyr Thr Pro Lys Ile
65 70 75 80

Leu Val Thr Cys Ile Ser Glu Asp Lys Ser Ile Ser Phe Ala Gly Cys
85 90 95

Leu Cys Gln Phe Phe Phe Ser Ala Gly Leu Ala Tyr Ser Glu Cys Tyr
100 105 110

Leu Leu Ala Ala Val Ala Tyr Asp Arg Tyr Val Ala Ile Ser Lys Pro
115 120 125

Leu Leu Tyr Ala Gln Ala Met Ser Ile Lys Leu Cys Ala Leu Leu Val
130 135 140

Ala Val Ser Tyr Cys Gly Gly Phe Ile Asn Ser Ser Ile Ile Thr Lys
 145 150 155 160

Lys Thr Phe Ser Phe Asn Phe Cys Arg Glu Asn Ile Ile Asp Asp Phe
 165 170 175

Phe Cys Asp Leu Leu Pro Leu Val Glu Leu Ala Cys Gly Glu Lys Gly
 180 185 190

Gly Tyr Lys Ile Met Met Tyr Phe Leu Leu Ala Ser Asn Val Ile Cys
 195 200 205

Pro Ala Val Leu Ile Leu Ala Ser Tyr Leu Phe Ile Ile Thr Ser Val
 210 215 220

Leu Arg Ile Ser Ser Ser Lys Gly Tyr Leu Lys Ala Phe Ser Thr Cys
 225 230 235 240

Ser Ser His Leu Thr Ser Val Thr Leu Tyr Tyr Gly Ser Ile Leu Tyr
 245 250 255

Ile Tyr Ala Leu Pro Arg Ser Ser Tyr Ser Phe Asp Met Asp Lys Ile
 260 265 270

Val Ser Thr Phe Tyr Thr Val Val Phe Pro Met Leu Asn Leu Met Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Lys Lys Leu Leu
 290 295 300

<210> 237
 <211> 939
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(936)
 <223>

<400> 237
 atg gaa gca gga aac caa aca gga ttt tta gag ttt atc ctt ctc gga 48
 Met Glu Ala Gly Asn Gln Thr Gly Phe Leu Glu Phe Ile Leu Leu Gly
 1 5 10 15

ctc tct gag gat cca gaa cta cag ccg ttc ata ttt ggg ctg ttc ctg 96
 Leu Ser Glu Asp Pro Glu Leu Gln Pro Phe Ile Phe Gly Leu Phe Leu
 20 25 30

tcc atg tac ctg gtg acg gtg ctg gga aac ctg ctc atc atc ctg gcc	144
Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala	
35 40 45	
atc agc tct gac tcc cac ctc cac acc ccc atg tac ttc ttc ctc tcc	192
Ile Ser Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser	
50 55 60	
aac ctg tcc tgg gtt gac atc tgt ttc agc act tgc atc gtc ccc aag	240
Asn Leu Ser Trp Val Asp Ile Cys Phe Ser Thr Cys Ile Val Pro Lys	
65 70 75 80	
atg ctg gtg aac atc cag acc gag aac aaa gcc atc tcc tac atg gac	288
Met Leu Val Asn Ile Gln Thr Glu Asn Lys Ala Ile Ser Tyr Met Asp	
85 90 95	
tgc ctc aca cag gtc tat ttc tcc atg ttt ttt cct att ctg gac acg	336
Cys Leu Thr Gln Val Tyr Phe Ser Met Phe Phe Pro Ile Leu Asp Thr	
100 105 110	
cta ctc ctg acc gtg atg gcc tat gac cgg ttt gtg gct gtc tgc cac	384
Leu Leu Leu Thr Val Met Ala Tyr Asp Arg Phe Val Ala Val Cys His	
115 120 125	
cct ctg cac tat atg atc atc atg aac ccc cac ctc tgt ggc ctc ctg	432
Pro Leu His Tyr Met Ile Ile Met Asn Pro His Leu Cys Gly Leu Leu	
130 135 140	
gtt ttt gtc acc tgg ctc att ggt gtc atg aca tcc ctc ctc cat att	480
Val Phe Val Thr Trp Leu Ile Gly Val Met Thr Ser Leu Leu His Ile	
145 150 155 160	
tct ctg atg atg cat cta atc ttc tgt aaa gat ttt gaa att cca cat	528
Ser Leu Met Met His Leu Ile Phe Cys Lys Asp Phe Glu Ile Pro His	
165 170 175	
ttt ttc tgc gaa ctg acg tac atc ctc cag ctg gcc tgc tct gat acc	576
Phe Phe Cys Glu Leu Thr Tyr Ile Leu Gln Leu Ala Cys Ser Asp Thr	
180 185 190	
ttc ctg aac agc acg ttg ata tac ttt atg acg ggt gtg ctg ggc gtt	624
Phe Leu Asn Ser Thr Leu Ile Tyr Phe Met Thr Gly Val Leu Gly Val	
195 200 205	
ttt ccc ctc ctt ggg atc att ttc tct tat tca cga att gct tca tcc	672
Phe Pro Leu Leu Gly Ile Ile Phe Ser Tyr Ser Arg Ile Ala Ser Ser	
210 215 220	
ata agg aag atg tcc tca tct ggg gga aaa caa aaa gca ctt tcc acc	720
Ile Arg Lys Met Ser Ser Ser Gly Gly Lys Gln Lys Ala Leu Ser Thr	
225 230 235 240	
tgt ggg tct cac ctc tcc gtc gtt tct tta ttt tat ggg aca ggc att	768
Cys Gly Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Gly Ile	
245 250 255	
ggg gtc cac ttc act tct gcg gtg act cac tct tcc cag aaa atc tcc	816
Gly Val His Phe Thr Ser Ala Val Thr His Ser Ser Gln Lys Ile Ser	
260 265 270	
gtg gcc tcg gtg atg tac act gtg gtc acc ccc atg ttg aac ccc ttc	864

Val Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
 275 280 285

atc tac agc ctg agg aac aag gat gtg aag gga gcc ctg ggg agt ctc 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Gly Ser Leu
 290 295 300

ctc agc agg gca gcc tct tgt ttg tga 939
 Leu Ser Arg Ala Ala Ser Cys Leu
 305 310

<210> 238
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 238

Met Glu Ala Gly Asn Gln Thr Gly Phe Leu Glu Phe Ile Leu Leu Gly
 1 5 10 15

Leu Ser Glu Asp Pro Glu Leu Gln Pro Phe Ile Phe Gly Leu Phe Leu
 20 25 30

Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45

Ile Ser Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Asn Leu Ser Trp Val Asp Ile Cys Phe Ser Thr Cys Ile Val Pro Lys
 65 70 75 80

Met Leu Val Asn Ile Gln Thr Glu Asn Lys Ala Ile Ser Tyr Met Asp
 85 90 95

Cys Leu Thr Gln Val Tyr Phe Ser Met Phe Phe Pro Ile Leu Asp Thr
 100 105 110

Leu Leu Leu Thr Val Met Ala Tyr Asp Arg Phe Val Ala Val Cys His
 115 120 125

Pro Leu His Tyr Met Ile Ile Met Asn Pro His Leu Cys Gly Leu Leu
 130 135 140

Val Phe Val Thr Trp Leu Ile Gly Val Met Thr Ser Leu Leu His Ile
 145 150 155 160

Ser Leu Met Met His Leu Ile Phe Cys Lys Asp Phe Glu Ile Pro His
 165 170 175

Phe Phe Cys Glu Leu Thr Tyr Ile Leu Gln Leu Ala Cys Ser Asp Thr
180 185 190

Phe Leu Asn Ser Thr Leu Ile Tyr Phe Met Thr Gly Val Leu Gly Val
195 200 205

Phe Pro Leu Leu Gly Ile Ile Phe Ser Tyr Ser Arg Ile Ala Ser Ser
210 215 220

Ile Arg Lys Met Ser Ser Ser Gly Gly Lys Gln Lys Ala Leu Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Gly Ile
245 250 255

Gly Val His Phe Thr Ser Ala Val Thr His Ser Ser Gln Lys Ile Ser
260 265 270

Val Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Gly Ser Leu
290 295 300

Leu Ser Arg Ala Ala Ser Cys Leu
305 310

<210> 239
<211> 939
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(936)
<223>

<400> 239
atg aaa gca gga aac ttc tca gac act cca gaa ttc ttt ctc ttg gga 48
Met Lys Ala Gly Asn Phe Ser Asp Thr Pro Glu Phe Phe Leu Leu Gly
1 5 10 15
ttg tca ggg gat ccg gag ctg cag ccc atc ctc ttc atg ctg ttc ctg 96
Leu Ser Gly Asp Pro Glu Leu Gln Pro Ile Leu Phe Met Leu Phe Leu
20 25 30
tcc atg tac ctg gcc aca atg ctg ggg aac ctg ctc atc atc ctg gcc 144
Ser Met Tyr Leu Ala Thr Met Leu Gly Asn Leu Leu Ile Ile Leu Ala
35 40 45

gtc aac tct gac tcc cac ctc cac acc ccc atg tac ttc ctc ctc tct Val Asn Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Leu Leu Ser 50 55 60	192
atc ctg tcc ttg gtc gac atc tgt ttc acc tcc acc acg atg ccc aag Ile Leu Ser Leu Val Asp Ile Cys Phe Thr Ser Thr Thr Met Pro Lys 65 70 75 80	240
atg ctg gtg aac atc cag gca cag gct caa tcc atc aat tac aca ggc Met Leu Val Asn Ile Gln Ala Gln Ala Gln Ser Ile Asn Tyr Thr Gly 85 90 95	288
tgc ctc acc caa atc tgc ttt gtc ctg gtt ttt gtt gga ttg gaa aat Cys Leu Thr Gln Ile Cys Phe Val Leu Val Phe Val Gly Leu Glu Asn 100 105 110	336
gga att ctg gtc atg atg gcc tat gat cga ttt gtg gcc atc tgt cac Gly Ile Leu Val Met Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His 115 120 125	384
cca ctg agg tac aat gtc atc atg aac ccc aaa ctc tgt ggg ctg ctg Pro Leu Arg Tyr Asn Val Ile Met Asn Pro Lys Leu Cys Gly Leu Leu 130 135 140	432
ctt ctg ctg tcc ttc atc gtt agt gtc ctg gat gct ctg ctg cac acg Leu Leu Leu Ser Phe Ile Val Ser Val Leu Asp Ala Leu Leu His Thr 145 150 155 160	480
ttg atg gtg cta cag ctg acc ttc tgc ata gac ctg gaa att ccc cac Leu Met Val Leu Gln Leu Thr Phe Cys Ile Asp Leu Glu Ile Pro His 165 170 175	528
ttt ttc tgt gaa cta gct cat att ctc aag ctc gcc tgt tct gat gtc Phe Phe Cys Glu Leu Ala His Ile Leu Lys Leu Ala Cys Ser Asp Val 180 185 190	576
ctc atc aat aac atc ctg gtg tat ttg gtg acc agc ctg tta ggt gtt Leu Ile Asn Asn Ile Leu Val Tyr Leu Val Thr Ser Leu Leu Gly Val 195 200 205	624
gtt cct ctc tct ggg atc att ttc tct tac aca cga att gtc tcc tct Val Pro Leu Ser Gly Ile Ile Phe Ser Tyr Thr Arg Ile Val Ser Ser 210 215 220	672
gtc atg aaa att cca tca gct ggt gga aag tat aaa gct ttt tcc atc Val Met Lys Ile Pro Ser Ala Gly Gly Lys Tyr Lys Ala Phe Ser Ile 225 230 235 240	720
tgc ggg tca cat tta atc gtt gtt tcc ttg ttt tat gga aca ggg ttt Cys Gly Ser His Leu Ile Val Val Ser Leu Phe Tyr Gly Thr Gly Phe 245 250 255	768
ggg gtg tac ctt agt tct ggg gct acc cac tcc tcc agg aag ggt gca Gly Val Tyr Leu Ser Ser Gly Ala Thr His Ser Ser Arg Lys Gly Ala 260 265 270	816
ata gca tca gtg atg tat acc gtg gtc acc ccc atg ctg aac cca ctc Ile Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Leu 275 280 285	864

att tac agc ctg aga aac aag gac atg ttg aag gct ttg agg aaa cta 912
 ile Tyr Ser Leu Arg Asn Lys Asp Met Leu Lys Ala Leu Arg Lys Leu
 290 295 300

ata tct agg ata cca tct ttc cat tga 939
 ile Ser Arg Ile Pro Ser Phe His
 305 310

<210> 240
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 240

Met Lys Ala Gly Asn Phe Ser Asp Thr Pro Glu Phe Phe Leu Leu Gly
 1 5 10 15

Leu Ser Gly Asp Pro Glu Leu Gln Pro Ile Leu Phe Met Leu Phe Leu
 20 25 30

Ser Met Tyr Leu Ala Thr Met Leu Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45

Val Asn Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60

Ile Leu Ser Leu Val Asp Ile Cys Phe Thr Ser Thr Thr Met Pro Lys
 65 70 75 80

Met Leu Val Asn Ile Gln Ala Gln Ala Gln Ser Ile Asn Tyr Thr Gly
 85 90 95

Cys Leu Thr Gln Ile Cys Phe Val Leu Val Phe Val Gly Leu Glu Asn
 100 105 110

Gly Ile Leu Val Met Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His
 115 120 125

Pro Leu Arg Tyr Asn Val Ile Met Asn Pro Lys Leu Cys Gly Leu Leu
 130 135 140

Leu Leu Leu Ser Phe Ile Val Ser Val Leu Asp Ala Leu Leu His Thr
 145 150 155 160

Leu Met Val Leu Gln Leu Thr Phe Cys Ile Asp Leu Glu Ile Pro His
 165 170 175

Phe Phe Cys Glu Leu Ala His Ile Leu Lys Leu Ala Cys Ser Asp Val

180 185 190

Leu Ile Asn Asn Ile Leu Val Tyr Leu Val Thr Ser Leu Leu Gly Val
195 200 205

Val Pro Leu Ser Gly Ile Ile Phe Ser Tyr Thr Arg Ile Val Ser Ser
210 215 220

Val Met Lys Ile Pro Ser Ala Gly Gly Lys Tyr Lys Ala Phe Ser Ile
225 230 235 240

Cys Gly Ser His Leu Ile Val Val Ser Leu Phe Tyr Gly Thr Gly Phe
245 250 255

Gly Val Tyr Leu Ser Ser Gly Ala Thr His Ser Ser Arg Lys Gly Ala
260 265 270

Ile Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Met Leu Lys Ala Leu Arg Lys Leu
290 295 300

Ile Ser Arg Ile Pro Ser Phe His
305 310

<210> 241
<211> 939
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1) .. (936)
<223>

<400> 241 48
atg gaa gca gaa aac ctt aca gaa tta tca aaa ttt ctc ctc ctg gga
Met Glu Ala Glu Asn Leu Thr Glu Leu Ser Lys Phe Leu Leu Leu Gly
1 5 10 15

ctc tca gat gat cct gaa ctg cag ccc gtc ctc ttt ggg ctg ttc ctg 96
Leu Ser Asp Asp Pro Glu Leu Gln Pro Val Leu Phe Gly Leu Phe Leu
20 25 30

tcc atg tac ctg gtc acg gtg ctg ggg aac ctg ctc atc att ctg gcc 144
Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
35 40 45

gtc agc tct gac tcc cac ctc cac acc ccc atg tac ttc ttc ctc tcc 192
Val Ser Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser

50	55	60	
aac ctg tcc ttt gtt gac atc tgt ttc atc tcc acc aca gtc ccc aag			240
Asn Leu Ser Phe Val Asp Ile Cys Phe Ile Ser Thr Thr Val Pro Lys			
65	70	75	80
atg cta gtg agc atc cag gca cgg agc aaa gac atc tcc tac atg ggg			288
Met Leu Val Ser Ile Gln Ala Arg Ser Lys Asp Ile Ser Tyr Met Gly			
	85	90	95
tgc ctc act cag gtg tat ttt tta atg atg ttt gct gga atg gat act			336
Cys Leu Thr Gln Val Tyr Phe Leu Met Met Phe Ala Gly Met Asp Thr			
	100	105	110
ttc cta ctg gcc gtg atg gcc tat gac cgg ttt gtg gcc atc tgc cac			384
Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His			
	115	120	125
cca ctg cac tac acg gtc atc atg aac ccc tgc ctc tgt ggc ctc ctg			432
Pro Leu His Tyr Thr Val Ile Met Asn Pro Cys Leu Cys Gly Leu Leu			
	130	135	140
gtt ctg gca tct tgg ttc atc att ttc tgg ttc tcc ctg gtt cat att			480
Val Leu Ala Ser Trp Phe Ile Ile Phe Trp Phe Ser Leu Val His Ile			
	145	150	155
cta ctg atg aag agg ttg acc ttc tcc aca ggc act gag att ccg cat			528
Leu Leu Met Lys Arg Leu Thr Phe Ser Thr Gly Thr Glu Ile Pro His			
	165	170	175
ttc ttc tgt gaa ccg gct cag gtc ctc aag gtg gcc tgc tct aac acc			576
Phe Phe Cys Glu Pro Ala Gln Val Leu Lys Val Ala Cys Ser Asn Thr			
	180	185	190
ctc ctc aat aac att gtc ttg tat gtg gcc acg gca ctg ctg ggt gtg			624
Leu Leu Asn Asn Ile Val Leu Tyr Val Ala Thr Ala Leu Leu Gly Val			
	195	200	205
ttt cct gta gct ggg atc ctc ttc tcc tac tct cag att gtc tcc tcc			672
Phe Pro Val Ala Gly Ile Leu Phe Ser Tyr Ser Gln Ile Val Ser Ser			
	210	215	220
tta atg gga atg tcc tcc acc aag ggc aag tac aaa gcc ttt tcc acc			720
Leu Met Gly Met Ser Ser Thr Lys Gly Lys Tyr Lys Ala Phe Ser Thr			
	225	230	235
tgt gga tct cac ctc tgt gtg gtc tcc ttg ttc tat gga aca gga ctt			768
Cys Gly Ser His Leu Cys Val Val Ser Leu Phe Tyr Gly Thr Gly Leu			
	245	250	255
ggg gtc tat ctg agt tct gct gtg acc cat tct tcc cag agc agc tcc			816
Gly Val Tyr Leu Ser Ser Ala Val Thr His Ser Ser Gln Ser Ser Ser			
	260	265	270
acc gcc tca gtg atg tac gcc atg gtc acc ccc atg ctg aac ccc ttc			864
Thr Ala Ser Val Met Tyr Ala Met Val Thr Pro Met Leu Asn Pro Phe			
	275	280	285
atc tac agc ctg agg aac aag gat gtg aag ggg gcc ctg gaa aga ctc			912
Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Glu Arg Leu			
	290	295	300

939

ctc agc agg gcc gac tct tgt cca tga
 Leu Ser Arg Ala Asp Ser Cys Pro
 305 310

<210> 242
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 242

Met Glu Ala Glu Asn Leu Thr Glu Leu Ser Lys Phe Leu Leu Gly
 1 5 10 15

Leu Ser Asp Asp Pro Glu Leu Gln Pro Val Leu Phe Gly Leu Phe Leu
 20 25 30

Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45

Val Ser Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Asn Leu Ser Phe Val Asp Ile Cys Phe Ile Ser Thr Thr Val Pro Lys
 65 70 75 80

Met Leu Val Ser Ile Gln Ala Arg Ser Lys Asp Ile Ser Tyr Met Gly
 85 90 95

Cys Leu Thr Gln Val Tyr Phe Leu Met Met Phe Ala Gly Met Asp Thr
 100 105 110

Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His
 115 120 125

Pro Leu His Tyr Thr Val Ile Met Asn Pro Cys Leu Cys Gly Leu Leu
 130 135 140

Val Leu Ala Ser Trp Phe Ile Ile Phe Trp Phe Ser Leu Val His Ile
 145 150 155 160

Leu Leu Met Lys Arg Leu Thr Phe Ser Thr Gly Thr Glu Ile Pro His
 165 170 175

Phe Phe Cys Glu Pro Ala Gln Val Leu Lys Val Ala Cys Ser Asn Thr
 180 185 190

Leu Leu Asn Asn Ile Val Leu Tyr Val Ala Thr Ala Leu Leu Gly Val
 195 200 205

Phe Pro Val Ala Gly Ile Leu Phe Ser Tyr Ser Gln Ile Val Ser Ser
 210 215 220

Leu Met Gly Met Ser Ser Thr Lys Gly Lys Tyr Lys Ala Phe Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Cys Val Val Ser Leu Phe Tyr Gly Thr Gly Leu
 245 250 255

Gly Val Tyr Leu Ser Ser Ala Val Thr His Ser Ser Gln Ser Ser Ser
 260 265 270

Thr Ala Ser Val Met Tyr Ala Met Val Thr Pro Met Leu Asn Pro Phe
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Glu Arg Leu
 290 295 300

Leu Ser Arg Ala Asp Ser Cys Pro
 305 310

<210> 243
 <211> 1038
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (1035)
 <223>

<400> 243
 atg ccg atg cag ctg ctg ctt aca gat ttt att atc ttt tcc atc aga 48
 Met Pro Met Gln Leu Leu Leu Thr Asp Phe Ile Ile Phe Ser Ile Arg
 1 5 10 15
 ttc atc atc aac agc atg gaa gcg aga aac caa aca gct att tca aaa 96
 Phe Ile Ile Asn Ser Met Glu Ala Arg Asn Gln Thr Ala Ile Ser Lys
 20 25 30
 ttc ctt ctc ctg gga ctg ata gag gat ccg gaa ctg cag ccc gtc ctt 144
 Phe Leu Leu Leu Gly Leu Ile Glu Asp Pro Glu Leu Gln Pro Val Leu
 35 40 45
 ttc agc ctg ttc ctg tcc atg tac ttg gtc acc atc ctg ggg aac ctg 192
 Phe Ser Leu Phe Leu Ser Met Tyr Leu Val Thr Ile Leu Gly Asn Leu
 50 55 60
 ctc atc ctc ttg gct gtc atc tct gac tct cac ctc cac acc ccc atg 240

364

305 310 315 320
 acc ttg agg aag ttc ata ggg agg ata cct tct ctt ctg tgg tgt gcc 1008
 Thr Leu Arg Lys Phe Ile Gly Arg Ile Pro Ser Leu Leu Trp Cys Ala
 325 330 335

 att tgc ttt gga ttc agg ttt cta gag taa 1038
 Ile Cys Phe Gly Phe Arg Phe Leu Glu
 340 345

 <210> 244
 <211> 345
 <212> PRT
 <213> Homo Sapiens

 <400> 244

 Met Pro Met Gln Leu Leu Leu Thr Asp Phe Ile Ile Phe Ser Ile Arg
 1 5 10 15

 Phe Ile Ile Asn Ser Met Glu Ala Arg Asn Gln Thr Ala Ile Ser Lys
 20 25 30

 Phe Leu Leu Leu Gly Leu Ile Glu Asp Pro Glu Leu Gln Pro Val Leu
 35 40 45

 Phe Ser Leu Phe Leu Ser Met Tyr Leu Val Thr Ile Leu Gly Asn Leu
 50 55 60

 Leu Ile Leu Leu Ala Val Ile Ser Asp Ser His Leu His Thr Pro Met
 65 70 75 80

 Tyr Phe Phe Leu Ser Asn Leu Ser Phe Leu Asp Ile Cys Leu Ser Thr
 85 90 95

 Thr Thr Ile Pro Lys Met Leu Val Asn Ile Gln Ala Gln Asn Arg Ser
 100 105 110

 Ile Thr Tyr Ser Gly Cys Leu Thr Gln Ile Cys Phe Val Leu Phe Phe
 115 120 125

 Ala Gly Leu Glu Asn Cys Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr
 130 135 140

 Val Ala Ile Cys His Pro Leu Arg Tyr Thr Val Ile Met Asn Pro Arg
 145 150 155 160

 Leu Cys Gly Leu Leu Ile Leu Leu Ser Leu Leu Thr Ser Val Val Asn
 165 170 175

Ala Leu Leu Leu Ser Leu Met Val Leu Arg Leu Ser Phe Cys Thr Asp
 180 185 190

Leu Glu Ile Pro Leu Phe Phe Cys Glu Leu Ala Gln Val Ile Gln Leu
 195 200 205

Thr Cys Ser Asp Thr Leu Ile Asn Asn Ile Leu Ile Tyr Phe Ala Ala
 210 215 220

Cys Ile Phe Gly Gly Val Pro Leu Ser Gly Ile Ile Leu Ser Tyr Thr
 225 230 235 240

Gln Ile Thr Ser Cys Val Leu Arg Met Pro Ser Ala Ser Gly Lys His
 245 250 255

Lys Ala Val Ser Thr Cys Gly Ser His Leu Ser Ile Val Leu Leu Phe
 260 265 270

Tyr Gly Ala Gly Leu Gly Val Tyr Ile Ser Ser Val Val Thr Asp Ser
 275 280 285

Pro Arg Lys Thr Ala Val Ala Ser Val Met Tyr Ser Val Phe Pro Gln
 290 295 300

Met Val Asn Pro Phe Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Gly
 305 310 315 320

Thr Leu Arg Lys Phe Ile Gly Arg Ile Pro Ser Leu Leu Trp Cys Ala
 325 330 335

Ile Cys Phe Gly Phe Arg Phe Leu Glu
 340 345

<210> 245
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (933)
 <223>

<400> 245
 atg gga ccc aga aac caa aca gct gtt tca gaa ttt ctt ctc atg aaa
 Met Gly Pro Arg Asn Gln Thr Ala Val Ser Glu Phe Leu Leu Met Lys
 1 5 10 15

gtg aca gag gac cca gaa ctg aag tta atc cct ttc agc ctg ttc ctg	96
Val Thr Glu Asp Pro Glu Leu Lys Leu Ile Pro Phe Ser Leu Phe Leu	
20 25 30	
tcc atg tac ctg gtc acc atc ctg ggg aac ctg ctc att ctc ctg gct	144
Ser Met Tyr Leu Val Thr Ile Leu Gly Asn Leu Leu Ile Leu Leu Ala	
35 40 45	
gtc atc tct gac tcc cac ctc cac acc ccc atg tac ttc ctt ctc ttt	192
Val Ile Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Leu Leu Phe	
50 55 60	
aat ctc tcc ttt act gac atc tgt tta acc aca acc aca gtc cca aag	240
Asn Leu Ser Phe Thr Asp Ile Cys Leu Thr Thr Thr Thr Val Pro Lys	
65 70 75 80	
atc cta gtg aac atc caa gct cag aat cag agt atc act tac aca ggc	288
Ile Leu Val Asn Ile Gln Ala Gln Asn Gln Ser Ile Thr Tyr Thr Gly	
85 90 95	
tgc ctc acc cag atc tgt ctt gtc ttg gtt ttt gct ggc ttg gaa agt	336
Cys Leu Thr Gln Ile Cys Leu Val Leu Val Phe Ala Gly Leu Glu Ser	
100 105 110	
tgc ttt ctt gca gtc atg gcc tac gac cgc tat gtg gcc att tgc cac	384
Cys Phe Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His	
115 120 125	
cca ctg agg tac aca gtc ctc atg aat gtc cat ttc tgg ggc ttg ctg	432
Pro Leu Arg Tyr Thr Val Leu Met Asn Val His Phe Trp Gly Leu Leu	
130 135 140	
att ctt ctc tcc atg ttc atg agc act atg gat gcc ctg gtt cag agt	480
Ile Leu Leu Ser Met Phe Met Ser Thr Met Asp Ala Leu Val Gln Ser	
145 150 155 160	
ctg atg gta ttg cag ctg tcc ttc tgc aaa aac gtt gaa atc cct ttg	528
Leu Met Val Leu Gln Leu Ser Phe Cys Lys Asn Val Glu Ile Pro Leu	
165 170 175	
ttc ttc tgt gaa gtc gtt cag gtc atc aag ctc gcc tgt tct gac acc	576
Phe Phe Cys Glu Val Val Gln Val Ile Lys Leu Ala Cys Ser Asp Thr	
180 185 190	
ctc atc aac aac atc ctc ata tat ttt gca agt agt gta ttt ggt gca	624
Leu Ile Asn Asn Ile Leu Ile Tyr Phe Ala Ser Ser Val Phe Gly Ala	
195 200 205	
att cct ctc tct gga ata att ttc tct tat tct caa ata gtc acc tct	672
Ile Pro Leu Ser Gly Ile Ile Phe Ser Tyr Ser Gln Ile Val Thr Ser	
210 215 220	
gtt ctg aga atg cca tca gca aga gga aag tat aaa gcg ttt tcc acc	720
Val Leu Arg Met Pro Ser Ala Arg Gly Lys Tyr Lys Ala Phe Ser Thr	
225 230 235 240	
tgt ggc tgt cac ctc tct gtt ttt tcc ttg ttc tat ggg aca gct ttt	768
Cys Gly Cys His Leu Ser Val Phe Ser Leu Phe Tyr Gly Thr Ala Phe	
245 250 255	
ggg gtg tac att agt tct gct gtt gct gag tct tcc cga att act gct	816

Gly Val Tyr Ile Ser Ser Ala Val Ala Glu Ser Ser Arg Ile Thr Ala
 260 265 270

gtg gct tca gtg atg tac act gtg gtc cct caa atg atg aac ccc ttc 864
 Val Ala Ser Val Met Tyr Thr Val Val Pro Gln Met Met Asn Pro Phe
 275 280 285

atc tac agc ctg aga aat aag gag atg aag aaa gct ttg agg aaa ctt 912
 Ile Tyr Ser Leu Arg Asn Lys Glu Met Lys Lys Ala Leu Arg Lys Leu
 290 295 300

att ggt agg ctg ttt cct ttt tag 936
 Ile Gly Arg Leu Phe Pro Phe
 305 310

<210> 246
 <211> 311
 <212> PRT
 <213> Homo Sapiens
 <400> 246

Met Gly Pro Arg Asn Gln Thr Ala Val Ser Glu Phe Leu Leu Met Lys
 1 5 10 15

Val Thr Glu Asp Pro Glu Leu Lys Leu Ile Pro Phe Ser Leu Phe Leu
 20 25 30

Ser Met Tyr Leu Val Thr Ile Leu Gly Asn Leu Leu Ile Leu Leu Ala
 35 40 45

Val Ile Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Leu Leu Phe
 50 55 60

Asn Leu Ser Phe Thr Asp Ile Cys Leu Thr Thr Thr Thr Val Pro Lys
 65 70 75 80

Ile Leu Val Asn Ile Gln Ala Gln Asn Gln Ser Ile Thr Tyr Thr Gly
 85 90 95

Cys Leu Thr Gln Ile Cys Leu Val Leu Val Phe Ala Gly Leu Glu Ser
 100 105 110

Cys Phe Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu Arg Tyr Thr Val Leu Met Asn Val His Phe Trp Gly Leu Leu
 130 135 140

Ile Leu Leu Ser Met Phe Met Ser Thr Met Asp Ala Leu Val Gln Ser
 145 150 155 160

Leu Met Val Leu Gln Leu Ser Phe Cys Lys Asn Val Glu Ile Pro Leu
 165 170 175

Phe Phe Cys Glu Val Val Gln Val Ile Lys Leu Ala Cys Ser Asp Thr
 180 185 190

Leu Ile Asn Asn Ile Leu Ile Tyr Phe Ala Ser Ser Val Phe Gly Ala
 195 200 205

Ile Pro Leu Ser Gly Ile Ile Phe Ser Tyr Ser Gln Ile Val Thr Ser
 210 215 220

Val Leu Arg Met Pro Ser Ala Arg Gly Lys Tyr Lys Ala Phe Ser Thr
 225 230 235 240

Cys Gly Cys His Leu Ser Val Phe Ser Leu Phe Tyr Gly Thr Ala Phe
 245 250 255

Gly Val Tyr Ile Ser Ser Ala Val Ala Glu Ser Ser Arg Ile Thr Ala
 260 265 270

Val Ala Ser Val Met Tyr Thr Val Val Pro Gln Met Met Asn Pro Phe
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Met Lys Lys Ala Leu Arg Lys Leu
 290 295 300

Ile Gly Arg Leu Phe Pro Phe
 305 310

<210> 247
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (933)
 <223>

<400> 247
 atg ggc aag gaa aac tgc acc act gtg gct gag ttc att ctc ctt gga 48
 Met Gly Lys Glu Asn Cys Thr Thr Val Ala Glu Phe Ile Leu Leu Gly
 1 5 10 15

cta tca gat gtc cct gag ttg aga gtc tgc ctc ttc ctg ctg ttc ctt 96
 Leu Ser Asp Val Pro Glu Leu Arg Val Cys Leu Phe Leu Leu Phe Leu
 20 25 30

ctc atc tat gga gtc acg ttg tta gcc aat ctg ggc atg act gca ctg Leu Ile Tyr Gly Val Thr Leu Leu Ala Asn Leu Gly Met Thr Ala Leu 35 40 45	144
att cag gtc agc tct cgg ctc cac acc ccc gtg tac ttt ttc ctc agc Ile Gln Val Ser Ser Arg Leu His Thr Pro Val Tyr Phe Phe Leu Ser 50 55 60	192
cac ttg tcc ttt gta gat ttc tgc tac tcc tca ata att gtg cca aag His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Val Pro Lys 65 70 75 80	240
atg ttg gct aat atc ttt aac aag gac aaa gcc atc tcc ttc cta ggg Met Leu Ala Asn Ile Phe Asn Lys Asp Lys Ala Ile Ser Phe Leu Gly 85 90 95	288
tgc atg gtg caa ttc tac ttg ttt tgc aca tgt gga gtc act gag gtc Cys Met Val Gln Phe Tyr Leu Phe Cys Thr Cys Gly Val Thr Glu Val 100 105 110	336
ttc ctg ctg gcc gtg atg gcc tat gac cgc ttt gtg gcc atc tgt aac Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn 115 120 125	384
ccc ctg ctg tac atg gtg acc atg tct caa aag ctg cgt gtg gag ctg Pro Leu Leu Tyr Met Val Thr Met Ser Gln Lys Leu Arg Val Glu Leu 130 135 140	432
acc tct tgc tgc tac ttc tgt ggg acg gtg tgt tct ctg att cac tcg Thr Ser Cys Cys Tyr Phe Cys Gly Thr Val Cys Ser Leu Ile His Ser 145 150 155 160	480
tcc tta gct ctt agg atc ctc ttc tat aga tct aat gtg att aac cac Ser Leu Ala Leu Arg Ile Leu Phe Tyr Arg Ser Asn Val Ile Asn His 165 170 175	528
ttc ttc tgt gat cta ccc cct ctc cta agt ctt gct tgc tct gat gtc Phe Phe Cys Asp Leu Pro Pro Leu Leu Ser Leu Ala Cys Ser Asp Val 180 185 190	576
act gtg aat gag aca ctg ctg ttc ctg gtg gcc act ttg aat gag agt Thr Val Asn Glu Thr Leu Leu Phe Leu Val Ala Thr Leu Asn Glu Ser 195 200 205	624
gtt acc atc atg atc atc ctc acc tcc tac ctg cta att ctc acc act Val Thr Ile Met Ile Ile Leu Thr Ser Tyr Leu Leu Ile Leu Thr Thr 210 215 220	672
atc ctg aag ata cac tct gca gag agc agg cac aaa gct ttc tcc acc Ile Leu Lys Ile His Ser Ala Glu Ser Arg His Lys Ala Phe Ser Thr 225 230 235 240	720
tgt gcc tcc cac ctc aca gcc atc act gtc tcc cat gga aca atc ctt Cys Ala Ser His Leu Thr Ala Ile Thr Val Ser His Gly Thr Ile Leu 245 250 255	768
tac att tat tgc agg ccg agt tca ggc aac agt gga gat gtt gac aaa Tyr Ile Tyr Cys Arg Pro Ser Ser Gly Asn Ser Gly Asp Val Asp Lys 260 265 270	816

gtg gcc acc gtg ttc tac aca gtt gtg att ccc atg ctg aac ccc ctg 864
 Val Ala Thr Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

atc tac agc ctg aga aat aag gat gtg aac aaa gct ctc aga aaa gtg 912
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Asn Lys Ala Leu Arg Lys Val
 290 295 300

atg ggc tcc aaa att cac tcc tag 936
 Met Gly Ser Lys Ile His Ser
 305 310

<210> 248

<211> 311

<212> PRT

<213> Homo Sapiens

<400> 248

Met Gly Lys Glu Asn Cys Thr Thr Val Ala Glu Phe Ile Leu Leu Gly
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Leu Ser Asp Val Pro Glu Leu Arg Val Cys Leu Phe Leu Leu Phe Leu
 20 25 30

Leu Ile Tyr Gly Val Thr Leu Leu Ala Asn Leu Gly Met Thr Ala Leu
 35 40 45

Ile Gln Val Ser Ser Arg Leu His Thr Pro Val Tyr Phe Phe Leu Ser
 50 55 60

His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Val Pro Lys
 65 70 75 80

Met Leu Ala Asn Ile Phe Asn Lys Asp Lys Ala Ile Ser Phe Leu Gly
 85 90 95

Cys Met Val Gln Phe Tyr Leu Phe Cys Thr Cys Gly Val Thr Glu Val
 100 105 110

Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn
 115 120 125

Pro Leu Leu Tyr Met Val Thr Met Ser Gln Lys Leu Arg Val Glu Leu
 130 135 140

Thr Ser Cys Cys Tyr Phe Cys Gly Thr Val Cys Ser Leu Ile His Ser
 145 150 155 160

Ser Leu Ala Leu Arg Ile Leu Phe Tyr Arg Ser Asn Val Ile Asn His

165 170 175

Phe Phe Cys Asp Leu Pro Pro Leu Leu Ser Leu Ala Cys Ser Asp Val
180 185 190

Thr Val Asn Glu Thr Leu Leu Phe Leu Val Ala Thr Leu Asn Glu Ser
195 200 205

Val Thr Ile Met Ile Ile Leu Thr Ser Tyr Leu Leu Ile Leu Thr Thr
210 215 220

Ile Leu Lys Ile His Ser Ala Glu Ser Arg His Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Leu Thr Ala Ile Thr Val Ser His Gly Thr Ile Leu
245 250 255

Tyr Ile Tyr Cys Arg Pro Ser Ser Gly Asn Ser Gly Asp Val Asp Lys
260 265 270

Val Ala Thr Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Asn Lys Ala Leu Arg Lys Val
290 295 300

Met Gly Ser Lys Ile His Ser
305 310

<210> 249
<211> 942
<212> DNA
<213> Homo Sapiens

<220>
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<222> (1)..(939)
<223>

<400> 249
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Met Leu Leu Thr Asp Arg Asn Thr Ser Gly Thr Thr Phe Thr Leu Leu
1 5 10 15
ggc ttc tca gat tac cca gaa ctg caa gtc cca ctc ttc ctg gtt ttt
Gly Phe Ser Asp Tyr Pro Glu Leu Gln Val Pro Leu Phe Leu Val Phe
20 25 30
ctg gcc atc tac aat gtc act gtg cta ggg aat att ggg ttg att gtg
Leu Ala Ile Tyr Asn Val Thr Val Leu Gly Asn Ile Gly Leu Ile Val

35	40	45	
atc atc aaa atc aac ccc aaa ctg cat acc ccc atg tac ttt ttc ctc Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu 50 55 60			192
agc caa ctc tcc ttt gtg gat ttc tgc tat tcc tcc atc att gct ccc Ser Gln Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro 65 70 75 80			240
aag atg ttg gtg aac ctt gtt gtc aaa gac aga acc att tca ttt tta Lys Met Leu Val Asn Leu Val Val Lys Asp Arg Thr Ile Ser Phe Leu 85 90 95			288
gga tgc gta gta caa ttc ttt ttc ttc tgt acc ttt gtg gtc act gaa Gly Cys Val Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr Glu 100 105 110			336
tcc ttt tta tta gct gtg atg gcc tat gac cgc ttc gtg gcc att tgc Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys 115 120 125			384
aac cct ctg ctc tac aca gtt aac atg tcc cag aaa ctc tgc gtg ctg Asn Pro Leu Leu Tyr Thr Val Asn Met Ser Gln Lys Leu Cys Val Leu 130 135 140			432
ctg gtt gtg gga tcc tat gcc tgg gga gtc tca tgt tcc ttg gaa ctg Leu Val Val Gly Ser Tyr Ala Trp Gly Val Ser Cys Ser Leu Glu Leu 145 150 155 160			480
acg tgc tct gct tta aag tta tgt ttt cat ggt ttc aac aca atc aat Thr Cys Ser Ala Leu Lys Leu Cys Phe His Gly Phe Asn Thr Ile Asn 165 170 175			528
cac ttc ttc tgt gag ttc tcc tca cta ctc tcc ctt tct tgc tct gat His Phe Phe Cys Glu Phe Ser Ser Leu Leu Ser Leu Ser Cys Ser Asp 180 185 190			576
act tac atc aac cag tgg ctg cta ttc ttt ctt gcc acc ttt aat gaa Thr Tyr Ile Asn Gln Trp Leu Leu Phe Phe Leu Ala Thr Phe Asn Glu 195 200 205			624
atc agc aca cta ctc atc gtt ctc aca tct tat gcg ttc att gtt gta Ile Ser Thr Leu Leu Ile Val Leu Thr Ser Tyr Ala Phe Ile Val Val 210 215 220			672
acc atc ctc aag atg cgt tca gtc agt ggg cgc cgc aaa gcc ttc tcc Thr Ile Leu Lys Met Arg Ser Val Ser Gly Arg Arg Lys Ala Phe Ser 225 230 235 240			720
acc tgt gcc tcc cac ctg act gcc atc acc atc ttc cat ggc acc atc Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr Ile 245 250 255			768
ctc ttc ctt tac tgt gtg ccc aac tcc aaa aac tcc agg cac aca gtc Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr Val 260 265 270			816
aaa gtg gcc tct gtg ttt tac acc gtg gtg atc ccc atg ttg aat ccc Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro 275 280 285			864

ctg atc tac agt ctg aga aat aaa gat gtc aag gat aca gtc acc gag 912
 Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Thr Val Thr Glu
 290 295 300

ata ctg gac acc aaa gtc ttc tct tac tga 942
 Ile Leu Asp Thr Lys Val Phe Ser Tyr
 305 310

<210> 250
 <211> 313
 <212> PRT
 <213> Homo Sapiens

<400> 250

Met Leu Leu Thr Asp Arg Asn Thr Ser Gly Thr Thr Phe Thr Leu Leu
 1 5 10 15

Gly Phe Ser Asp Tyr Pro Glu Leu Gln Val Pro Leu Phe Leu Val Phe
 20 25 30

Leu Ala Ile Tyr Asn Val Thr Val Leu Gly Asn Ile Gly Leu Ile Val
 35 40 45

Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Ser Gln Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro
 65 70 75 80

Lys Met Leu Val Asn Leu Val Val Lys Asp Arg Thr Ile Ser Phe Leu
 85 90 95

Gly Cys Val Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr Glu
 100 105 110

Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys
 115 120 125

Asn Pro Leu Leu Tyr Thr Val Asn Met Ser Gln Lys Leu Cys Val Leu
 130 135 140

Leu Val Val Gly Ser Tyr Ala Trp Gly Val Ser Cys Ser Leu Glu Leu
 145 150 155 160

Thr Cys Ser Ala Leu Lys Leu Cys Phe His Gly Phe Asn Thr Ile Asn
 165 170 175

His Phe Phe Cys Glu Phe Ser Ser Leu Leu Ser Leu Ser Cys Ser Asp
 180 185 190

Thr Tyr Ile Asn Gln Trp Leu Leu Phe Phe Leu Ala Thr Phe Asn Glu
 195 200 205

Ile Ser Thr Leu Leu Ile Val Leu Thr Ser Tyr Ala Phe Ile Val Val
 210 215 220

Thr Ile Leu Lys Met Arg Ser Val Ser Gly Arg Arg Lys Ala Phe Ser
 225 230 235 240

Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr Ile
 245 250 255

Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr Val
 260 265 270

Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
 275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Thr Val Thr Glu
 290 295 300

Ile Leu Asp Thr Lys Val Phe Ser Tyr
 305 310

<210> 251
 <211> 987
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1)..(984)
 <223>

<400> 251
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 Met Phe Leu Thr Glu Arg Asn Thr Thr Ser Glu Ala Thr Phe Thr Leu
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 ttg ggc ttc tca gat tac ctg gaa ctg caa att ccc ctc ttc ttt gta 96
 Leu Gly Phe Ser Asp Tyr Leu Glu Leu Gln Ile Pro Leu Phe Phe Val
 20 25 30
 ttt ctg gca gtc tac ggc ttc agt gtg gta ggg aat ctt ggg atg ata 144
 Phe Leu Ala Val Tyr Gly Phe Ser Val Val Gly Asn Leu Gly Met Ile
 35 40 45
 gtg atc atc aaa att aac cca aaa ttg cat acc ccc atg tat ttt ttc 192

Val Ile Ile Lys Ile Asn Pro Lys Leu His Thr Pro Met Tyr Phe Phe	
50 55 60	
ctc aac cac ctc tcc ttt gtg gat ttc tgc tat tcc tcc atc att gct	240
Leu Asn His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala	
65 70 75 80	
ccc atg atg ctg gtg aac ctg gtt gta gaa gat aga acc att tca ttc	288
Pro Met Met Leu Val Asn Leu Val Val Glu Asp Arg Thr Ile Ser Phe	
85 90 95	
tca gga tgt ttg gtg caa ttc ttt ttc ttt tgc acc ttt gta gtg act	336
Ser Gly Cys Leu Val Gln Phe Phe Phe Phe Cys Thr Phe Val Val Thr	
100 105 110	
gaa tta att cta ttt gcg gtg atg gcc tat gac cac ttt gtg gcc att	384
Glu Leu Ile Leu Phe Ala Val Met Ala Tyr Asp His Phe Val Ala Ile	
115 120 125	
tgc aat cct ctg ctc tac aca gtt gcc atc tcc cag aaa ctc tgt gcc	432
Cys Asn Pro Leu Leu Tyr Thr Val Ala Ile Ser Gln Lys Leu Cys Ala	
130 135 140	
atg ctg gtg gtt gta ttg tat gca tgg gga gtc gca tgt tcc ctg aca	480
Met Leu Val Val Val Leu Tyr Ala Trp Gly Val Ala Cys Ser Leu Thr	
145 150 155 160	
ctc gcg tgc tct gct tta aag tta tct ttt cat ggt ttc aac aca atc	528
Leu Ala Cys Ser Ala Leu Lys Leu Ser Phe His Gly Phe Asn Thr Ile	
165 170 175	
aat cat ttc ttc tgt gag tta tcc tcc ctg ata tca ctc tct tac cct	576
Asn His Phe Phe Cys Glu Leu Ser Ser Leu Ile Ser Leu Ser Tyr Pro	
180 185 190	
gac tct tat ctc agc cag ttg ctt ctt ttc act gtt gcc act ttt aat	624
Asp Ser Tyr Leu Ser Gln Leu Leu Phe Thr Val Ala Thr Phe Asn	
195 200 205	
gag ata agc aca cta ctc atc att ctg aca tct tat gca ttc atc att	672
Glu Ile Ser Thr Leu Leu Ile Ile Leu Thr Ser Tyr Ala Phe Ile Ile	
210 215 220	
gtc acc acc ttg aag atg cct tca gcc agt ggg cac cgc aaa gtc ttc	720
Val Thr Thr Leu Lys Met Pro Ser Ala Ser Gly His Arg Lys Val Phe	
225 230 235 240	
tcc acc tgt gcc tcc cac ctg act gcc atc acc atc ttc cat ggc acc	768
Ser Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr	
245 250 255	
atc ctc ttc ctc tac tgt gta ccc aac tcc aaa aac tcc agg cac aca	816
Ile Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr	
260 265 270	
gtc aaa gtg gcc tct gtg ttt tac acc gtg gtg atc ccc ttg ttg aat	864
Val Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Leu Leu Asn	
275 280 285	
ccc ctg atc tac agt ctg aga aat aaa gat gtt aag gat gca atc cga	912
Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Ile Arg	

377

Asn His Phe Phe Cys Glu Leu Ser Ser Leu Ile Ser Leu Ser Tyr Pro
 180 185 190

Asp Ser Tyr Leu Ser Gln Leu Leu Leu Phe Thr Val Ala Thr Phe Asn
 195 200 205

Glu Ile Ser Thr Leu Leu Ile Ile Leu Thr Ser Tyr Ala Phe Ile Ile
 210 215 220

Val Thr Thr Leu Lys Met Pro Ser Ala Ser Gly His Arg Lys Val Phe
 225 230 235 240

Ser Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr
 245 250 255

Ile Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg His Thr
 260 265 270

Val Lys Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Leu Leu Asn
 275 280 285

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Ile Arg
 290 295 300

Lys Ile Ile Asn Thr Lys Tyr Phe His Ile Lys His Arg His Trp Tyr
 305 310 315 320

Pro Phe Asn Phe Val Ile Glu Gln
 325

<210> 253
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(942)
 <223>

<400> 253
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 Met Met Ala Ser Glu Arg Asn Gln Ser Ser Thr Pro Thr Phe Ile Leu
 1 5 10 15

48

ttg ggt ttt tca gaa tac cca gaa atc cag gtt cca ctc ttt ctg gtt
 Leu Gly Phe Ser Glu Tyr Pro Glu Ile Gln Val Pro Leu Phe Leu Val
 20 25 30

96

ttc ttg ttc gtc tac aca gtc act gta gtg ggg aac ttg ggc atg ata	144
Phe Leu Phe Val Tyr Thr Val Thr Val Val Gly Asn Leu Gly Met Ile	
35 40 45	
ata atc atc aga ctc aat tca aaa ctc cat aca atc atg tgc ttt ttc	192
Ile Ile Ile Arg Leu Asn Ser Lys Leu His Thr Ile Met Cys Phe Phe	
50 55 60	
ctt agt cac ttg tcc ttg aca gac ttc tgt ttt tcc act gta gtt aca	240
Leu Ser His Leu Ser Leu Thr Asp Phe Cys Phe Ser Thr Val Val Thr	
65 70 75 80	
cct aaa ctg ttg gag aac ttg gtt gtg gaa tac aga acc atc tct ttc	288
Pro Lys Leu Leu Glu Asn Leu Val Val Glu Tyr Arg Thr Ile Ser Phe	
85 90 95	
tct ggt tgc atc atg caa ttt tgt ttt gct tgc att ttt gga gtg aca	336
Ser Gly Cys Ile Met Gln Phe Cys Phe Ala Cys Ile Phe Gly Val Thr	
100 105 110	
gaa act ttc atg tta gca gcg atg gct tat gac cgt ttt gtg gca gtt	384
Glu Thr Phe Met Leu Ala Ala Met Ala Tyr Asp Arg Phe Val Ala Val	
115 120 125	
tgt aaa ccc ttg ctg tat acc act att atg tct cag aag ctc tgt gct	432
Cys Lys Pro Leu Leu Tyr Thr Thr Ile Met Ser Gln Lys Leu Cys Ala	
130 135 140	
ctt ctg gtg gct ggg tcc tat aca tgg ggg ata gtg tgc tcc ctg ata	480
Leu Leu Val Ala Gly Ser Tyr Thr Trp Gly Ile Val Cys Ser Leu Ile	
145 150 155 160	
ctc aca tat ttt ctt ctt gac tta tcg ttt tgt gaa tct acc ttc ata	528
Leu Thr Tyr Phe Leu Leu Asp Leu Ser Phe Cys Glu Ser Thr Phe Ile	
165 170 175	
aat aat ttt atc tgt gac cac tct gta att gtt tct gcc tcc tac tca	576
Asn Asn Phe Ile Cys Asp His Ser Val Ile Val Ser Ala Ser Tyr Ser	
180 185 190	
gac ccc tat atc agc cag agg cta tgc ttt att att gcc ata ttc aat	624
Asp Pro Tyr Ile Ser Gln Arg Leu Cys Phe Ile Ile Ala Ile Phe Asn	
195 200 205	
gag gtg agc agc cta att atc att ctg aca tca tat atg ctt att ttc	672
Glu Val Ser Ser Leu Ile Ile Ile Leu Thr Ser Tyr Met Leu Ile Phe	
210 215 220	
act acc att atg aag atg cga tct gca agt ggg cgc cag aaa act ttc	720
Thr Thr Ile Met Lys Met Arg Ser Ala Ser Gly Arg Gln Lys Thr Phe	
225 230 235 240	
tcc acc tgt gcc tcc cac ctg aca gcc atc act atc ttc cat gga act	768
Ser Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr	
245 250 255	
atc ctt ttc ctt tac tgt gtt cct aat cct aaa act tct agc ctc ata	816
Ile Leu Phe Leu Tyr Cys Val Pro Asn Pro Lys Thr Ser Ser Leu Ile	
260 265 270	
gtt aca gtg gct tct gtg ttt tac aca gtg gcg att cca atg ctg aac	864

Val Thr Val Ala Ser Val Phe Tyr Thr Val Ala Ile Pro Met Leu Asn
 275 280 285
 cca ttg atc tac agc ctt agg aac aaa gat atc aat aac atg ttt gaa 912
 Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Ile Asn Asn Met Phe Glu
 290 295 300
 aaa tta gtt gtc acc aaa ttg att tac cac tga 945
 Lys Leu Val Val Thr Lys Leu Ile Tyr His
 305 310
 <210> 254
 <211> 314
 <212> PRT
 <213> Homo Sapiens
 <400> 254
 Met Met Ala Ser Glu Arg Asn Gln Ser Ser Thr Pro Thr Phe Ile Leu
 1 5 10 15
 Leu Gly Phe Ser Glu Tyr Pro Glu Ile Gln Val Pro Leu Phe Leu Val
 20 25 30
 Phe Leu Phe Val Tyr Thr Val Thr Val Val Gly Asn Leu Gly Met Ile
 35 40 45
 Ile Ile Ile Arg Leu Asn Ser Lys Leu His Thr Ile Met Cys Phe Phe
 50 55 60
 Leu Ser His Leu Ser Leu Thr Asp Phe Cys Phe Ser Thr Val Val Thr
 65 70 75 80
 Pro Lys Leu Leu Glu Asn Leu Val Val Glu Tyr Arg Thr Ile Ser Phe
 85 90 95
 Ser Gly Cys Ile Met Gln Phe Cys Phe Ala Cys Ile Phe Gly Val Thr
 100 105 110
 Glu Thr Phe Met Leu Ala Ala Met Ala Tyr Asp Arg Phe Val Ala Val
 115 120 125
 Cys Lys Pro Leu Leu Tyr Thr Thr Ile Met Ser Gln Lys Leu Cys Ala
 130 135 140
 Leu Leu Val Ala Gly Ser Tyr Thr Trp Gly Ile Val Cys Ser Leu Ile
 145 150 155 160
 Leu Thr Tyr Phe Leu Leu Asp Leu Ser Phe Cys Glu Ser Thr Phe Ile
 165 170 175

Asn Asn Phe Ile Cys Asp His Ser Val Ile Val Ser Ala Ser Tyr Ser
180 185 190

Asp Pro Tyr Ile Ser Gln Arg Leu Cys Phe Ile Ile Ala Ile Phe Asn
195 200 205

Glu Val Ser Ser Leu Ile Ile Ile Leu Thr Ser Tyr Met Leu Ile Phe
210 215 220

Thr Thr Ile Met Lys Met Arg Ser Ala Ser Gly Arg Gln Lys Thr Phe
225 230 235 240

Ser Thr Cys Ala Ser His Leu Thr Ala Ile Thr Ile Phe His Gly Thr
245 250 255

Ile Leu Phe Leu Tyr Cys Val Pro Asn Pro Lys Thr Ser Ser Leu Ile
260 265 270

Val Thr Val Ala Ser Val Phe Tyr Thr Val Ala Ile Pro Met Leu Asn
275 280 285

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Ile Asn Asn Met Phe Glu
290 295 300

Lys Leu Val Val Thr Lys Leu Ile Tyr His
305 310

<210> 255

<211> 945

<212> DNA

<213> Homo Sapiens

<220>

<221> CDS

<222> (1)..(942)

<223>

<400> 255

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tta ggt ttc aca gat tac cca aag ctt cag att cct ctc ttc ctt gtg 96
Leu Gly Phe Thr Asp Tyr Pro Lys Leu Gln Ile Pro Leu Phe Leu Val
20 25 30

ttt ctg ctc atg tat gtt atc aca gtg gta gga aac ctt ggg atg atc 144
Phe Leu Leu Met Tyr Val Ile Thr Val Val Gly Asn Leu Gly Met Ile
35 40 45

ata ata atc aag att aac ccc aaa ttt cac act cct atg tac ttt ttc Ile Ile Ile Lys Ile Asn Pro Lys Phe His Thr Pro Met Tyr Phe Phe 50 55 60	192
ctt agt cac ctc tct ttt gtt gat ttt tgt tac tct tcc att gtc act Leu Ser His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Val Thr 65 70 75 80	240
ccc aag ctg ctt gag aac ttg gta atg gca gat aaa agc atc ttc tac Pro Lys Leu Leu Glu Asn Leu Val Met Ala Asp Lys Ser Ile Phe Tyr 85 90 95	288
ttt agc tgc atg atg cag tac ttc ctg tcc tgc act gct gtg gtg aca Phe Ser Cys Met Met Gln Tyr Phe Leu Ser Cys Thr Ala Val Val Thr 100 105 110	336
gag tct ttc ttg ctg gca gtg atg gcc tat gac cgc ttt gtg gcc atc Glu Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile 115 120 125	384
tgc aat cct ctg ctt tat aca gtg gcc atg tca cag agg ctc tgt gcc Cys Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Gln Arg Leu Cys Ala 130 135 140	432
ctg ctg gtg gct ggg tca tat ctc tgg ggc atg ttt ggc ccc ttg gta Leu Leu Val Ala Gly Ser Tyr Leu Trp Gly Met Phe Gly Pro Leu Val 145 150 155 160	480
ctc ctt tgt tat gct ctc cgg tta aac ttc tct gga cct aat gta atc Leu Leu Cys Tyr Ala Leu Arg Leu Asn Phe Ser Gly Pro Asn Val Ile 165 170 175	528
aac cac ttc ttt tgt gag tat act gct ctc atc tct gtg tct ggc tct Asn His Phe Phe Cys Glu Tyr Thr Ala Leu Ile Ser Val Ser Gly Ser 180 185 190	576
gat ata ctc atc ccc cac ctg ctg ctt ttc agc ttc gcc acc ttc aat Asp Ile Leu Ile Pro His Leu Leu Leu Phe Ser Phe Ala Thr Phe Asn 195 200 205	624
gag atg tgt aca cta ctg atc atc ctc act tcc tat gtt ttc att ttt Glu Met Cys Thr Leu Leu Ile Ile Leu Thr Ser Tyr Val Phe Ile Phe 210 215 220	672
gtg act gta cta aaa atc cgt tct gtt agt ggg cgc cac aaa gcc ttc Val Thr Val Leu Lys Ile Arg Ser Val Ser Gly Arg His Lys Ala Phe 225 230 235 240	720
tcc acc tgg gcc tcc cac ctg act tct atc acc atc ttc cat ggg acc Ser Thr Trp Ala Ser His Leu Thr Ser Ile Thr Ile Phe His Gly Thr 245 250 255	768
atc ctt ttc ctt tac tgt gta ccc aac tcc aaa aac tct cgg caa aca Ile Leu Phe Leu Tyr Cys Val Pro Asn Ser Lys Asn Ser Arg Gln Thr 260 265 270	816
gtc aaa gtg gcc tct gta ttt tac aca gtt gtc aac ccc atg ctg aac Val Lys Val Ala Ser Val Phe Tyr Thr Val Val Asn Pro Met Leu Asn 275 280 285	864

cct ctg atc tac agc cta agg aat aaa gac gtg aag gat gct ttc tgg 912
 Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Asp Ala Phe Trp
 290 295 300

aag tta ata cat aca caa gtt cca ttt cac tga 945
 Lys Leu Ile His Thr Gln Val Pro Phe His
 305 310

<210> 256

<211> 314

<212> PRT

<213> Homo Sapiens

<400> 256

Met Met Met Val Leu Arg Asn Leu Ser Met Glu Pro Thr Phe Ala Leu
 1 5 10 15

Leu Gly Phe Thr Asp Tyr Pro Lys Leu Gln Ile Pro Leu Phe Leu Val
 20 25 30

Phe Leu Leu Met Tyr Val Ile Thr Val Val Gly Asn Leu Gly Met Ile
 35 40 45

Ile Ile Ile Lys Ile Asn Pro Lys Phe His Thr Pro Met Tyr Phe Phe
 50 55 60

Leu Ser His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Val Thr
 65 70 75 80

Pro Lys Leu Leu Glu Asn Leu Val Met Ala Asp Lys Ser Ile Phe Tyr
 85 90 95

Phe Ser Cys Met Met Gln Tyr Phe Leu Ser Cys Thr Ala Val Val Thr
 100 105 110

Glu Ser Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile
 115 120 125

Cys Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Gln Arg Leu Cys Ala
 130 135 140

Leu Leu Val Ala Gly Ser Tyr Leu Trp Gly Met Phe Gly Pro Leu Val
 145 150 155 160

Leu Leu Cys Tyr Ala Leu Arg Leu Asn Phe Ser Gly Pro Asn Val Ile
 165 170 175

Asn His Phe Phe Cys Glu Tyr Thr Ala Leu Ile Ser Val Ser Gly Ser

[illegible]

50	55	60	
gct ctt tct ttt ctg gag att tgg tat acc aca gcc aca atc cca aag			240
Ala Leu Ser Phe Leu Glu Ile Trp Tyr Thr Thr Ala Thr Ile Pro Lys			
65	70	75	80
atg ctg tct agc ctg ctt agt gag agg agc att tcc ttc aat ggt tgt			288
Met Leu Ser Ser Leu Leu Ser Glu Arg Ser Ile Ser Phe Asn Gly Cys			
	85	90	95
ctc ctg cag atg tat ttc ttc cat tcc acc ggc atc tgt gag gtg tgt			336
Leu Leu Gln Met Tyr Phe Phe His Ser Thr Gly Ile Cys Glu Val Cys			
	100	105	110
ctc ttg aca gtt atg gcc ttt gac cac tac ctg gcc ata tgc agc cct			384
Leu Leu Thr Val Met Ala Phe Asp His Tyr Leu Ala Ile Cys Ser Pro			
	115	120	125
ctt cat tat ccc tct atc atg acc ccc aag cta tgt acc caa ctg act			432
Leu His Tyr Pro Ser Ile Met Thr Pro Lys Leu Cys Thr Gln Leu Thr			
	130	135	140
tta agt tgc tgt gtt tgt ggc ttt atc aca ccc gtt cct gag att gcc			480
Leu Ser Cys Cys Val Cys Gly Phe Ile Thr Pro Val Pro Glu Ile Ala			
145	150	155	160
tgg atc tct aca ctg cca ttt tgt ggt tgc aat cac ctt gaa cat atc			528
Trp Ile Ser Thr Leu Pro Phe Cys Gly Ser Asn His Leu Glu His Ile			
	165	170	175
ttc tgt gac ttc ctc cca gtg ctg cgt ctg gcc tgc aca gac aca cga			576
Phe Cys Asp Phe Leu Pro Val Leu Arg Leu Ala Cys Thr Asp Thr Arg			
	180	185	190
gcc atc gtc atg att cag gta gtg gat gtc att cat gca gtg gag att			624
Ala Ile Val Met Ile Gln Val Val Asp Val Ile His Ala Val Glu Ile			
	195	200	205
att aca gct gtg atg ctc atc ttc atg tcc tac gat ggt att gtg gct			672
Ile Thr Ala Val Met Leu Ile Phe Met Ser Tyr Asp Gly Ile Val Ala			
	210	215	220
gta att cta cgt att cat tca gct gga ggc cgc cgc aca gca ttt tcc			720
Val Ile Leu Arg Ile His Ser Ala Gly Gly Arg Arg Thr Ala Phe Ser			
225	230	235	240
acg tgt gtc tct cac ttc att gtc ttt tgc ctc ttc ttt ggc agt gtg			768
Thr Cys Val Ser His Phe Ile Val Phe Ser Leu Phe Phe Gly Ser Val			
	245	250	255
act ctc atg tac cta cgc ttc tct gcc acc tac tct ttg ttc tgg gat			816
Thr Leu Met Tyr Leu Arg Phe Ser Ala Thr Tyr Ser Leu Phe Trp Asp			
	260	265	270
ata gcc att gct ctg gcc ttt gca gtt ttg tct ccc ttc ttc aac ccc			864
Ile Ala Ile Ala Leu Ala Phe Ala Val Leu Ser Pro Phe Phe Asn Pro			
	275	280	285
att atc tat agc ctg agg aat aaa gaa ata aaa gaa gct ata aaa aag			912
Ile Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Glu Ala Ile Lys Lys			
	290	295	300

cac ata ggt caa gct aag ata ttt ttt tcc gta aga cca ggg acc tca 960
 His Ile Gly Gln Ala Lys Ile Phe Phe Ser Val Arg Pro Gly Thr Ser
 305 310 315 320

agt aag ata ttt tag 975
 Ser Lys Ile Phe

<210> 258
 <211> 324
 <212> PRT
 <213> Homo Sapiens

<400> 258

Met Glu Ser Pro Asn Gln Thr Thr Ile Gln Glu Phe Ile Phe Ser Ala
 1 5 10 15

Phe Pro Tyr Ser Trp Val Lys Ser Val Val Cys Phe Val Pro Leu Leu
 20 25 30

Phe Ile Tyr Ala Phe Ile Val Val Gly Asn Leu Val Ile Ile Thr Val
 35 40 45

Val Gln Leu Asn Thr His Leu His Thr Pro Met Tyr Thr Phe Ile Ser
 50 55 60

Ala Leu Ser Phe Leu Glu Ile Trp Tyr Thr Thr Ala Thr Ile Pro Lys
 65 70 75 80

Met Leu Ser Ser Leu Leu Ser Glu Arg Ser Ile Ser Phe Asn Gly Cys
 85 90 95

Leu Leu Gln Met Tyr Phe Phe His Ser Thr Gly Ile Cys Glu Val Cys
 100 105 110

Leu Leu Thr Val Met Ala Phe Asp His Tyr Leu Ala Ile Cys Ser Pro
 115 120 125

Leu His Tyr Pro Ser Ile Met Thr Pro Lys Leu Cys Thr Gln Leu Thr
 130 135 140

Leu Ser Cys Cys Val Cys Gly Phe Ile Thr Pro Val Pro Glu Ile Ala
 145 150 155 160

Trp Ile Ser Thr Leu Pro Phe Cys Gly Ser Asn His Leu Glu His Ile
 165 170 175

Phe Cys Asp Phe Leu Pro Val Leu Arg Leu Ala Cys Thr Asp Thr Arg
180 185 190

Ala Ile Val Met Ile Gln Val Val Asp Val Ile His Ala Val Glu Ile
195 200 205

Ile Thr Ala Val Met Leu Ile Phe Met Ser Tyr Asp Gly Ile Val Ala
210 215 220

Val Ile Leu Arg Ile His Ser Ala Gly Gly Arg Arg Thr Ala Phe Ser
225 230 235 240

Thr Cys Val Ser His Phe Ile Val Phe Ser Leu Phe Phe Gly Ser Val
245 250 255

Thr Leu Met Tyr Leu Arg Phe Ser Ala Thr Tyr Ser Leu Phe Trp Asp
260 265 270

Ile Ala Ile Ala Leu Ala Phe Ala Val Leu Ser Pro Phe Phe Asn Pro
275 280 285

Ile Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Glu Ala Ile Lys Lys
290 295 300

His Ile Gly Gln Ala Lys Ile Phe Phe Ser Val Arg Pro Gly Thr Ser
305 310 315 320

Ser Lys Ile Phe

<210> 259
<211> 948
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(945)
<223>

<400> 259
atg gag agc aga aac caa tca aca gtg act gaa ttt atc ttc act gga 48
Met Glu Ser Arg Asn Gln Ser Thr Val Thr Glu Phe Ile Phe Thr Gly
1 5 10 15
ttc cct cag ctt cag gat ggt agt ctc ctg tac ttc ttt cct tta ctt 96
Phe Pro Gln Leu Gln Asp Gly Ser Leu Tyr Phe Phe Pro Leu Leu
20 25 30
ttc atc tat act ttt att atc att gat aac tta tta atc ttc tct gct 144

Phe Ile Tyr Thr Phe Ile Ile Ile Asp Asn Leu Leu Ile Phe Ser Ala	
35 40 45	
gta agg ctg gac acc cat ctc cac aac ccc atg tat aat ttt atc agt	192
Val Arg Leu Asp Thr His Leu His Asn Pro Met Tyr Asn Phe Ile Ser	
50 55 60	
ata ttt tcc ttt ctg gag atc tgg tac acc aca gcc acc att ccc aag	240
Ile Phe Ser Phe Leu Glu Ile Trp Tyr Thr Thr Ala Thr Ile Pro Lys	
65 70 75 80	
atg ctc tcc aac ctc atc agt gaa aag aag gcc atc tca atg act ggc	288
Met Leu Ser Asn Leu Ile Ser Glu Lys Lys Ala Ile Ser Met Thr Gly	
85 90 95	
tgc atc ttg cag atg tat ttc ttc cac tca ctt gaa aac tca gag ggg	336
Cys Ile Leu Gln Met Tyr Phe Phe His Ser Leu Glu Asn Ser Glu Gly	
100 105 110	
atc ttg ctg acc acc atg gcc att gac aga tac gtt gcc atc tgc aac	384
Ile Leu Leu Thr Thr Met Ala Ile Asp Arg Tyr Val Ala Ile Cys Asn	
115 120 125	
cct ctt cgc tat caa atg atc atg acc ccc cgg ctc tgt gct cac ctc	432
Pro Leu Arg Tyr Gln Met Ile Met Thr Pro Arg Leu Cys Ala His Leu	
130 135 140	
tct gca ggt tcc tgc ctc ttc ggt ttc ctt atc ctg ctt ccc gag att	480
Ser Ala Gly Ser Cys Leu Phe Gly Phe Leu Ile Leu Leu Pro Glu Ile	
145 150 155 160	
gtg atg att tcc aca ctg cct ttc tgt ggg ccc aac caa atc cat cag	528
Val Met Ile Ser Thr Leu Pro Phe Cys Gly Pro Asn Gln Ile His Gln	
165 170 175	
atc ttc tgt gac ttg gtc cct gtg cta agc ctg gcc tgt aca gac acg	576
Ile Phe Cys Asp Leu Val Pro Val Leu Ser Leu Ala Cys Thr Asp Thr	
180 185 190	
tcc atg att ctg att gag gat gtg att cat gct gtg acc atc atc att	624
Ser Met Ile Leu Ile Glu Asp Val Ile His Ala Val Thr Ile Ile Ile	
195 200 205	
acc ttc cta atc att gcc ctg tcc tat gta aga att gtc act gtg ata	672
Thr Phe Leu Ile Ile Ala Leu Ser Tyr Val Arg Ile Val Thr Val Ile	
210 215 220	
ttg agg att ccc tct tct gaa ggg agg caa aag gct ttt tct acc tgt	720
Leu Arg Ile Pro Ser Ser Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys	
225 230 235 240	
gca ggc cac ctc atg gtc ttc ctg ata ttc ttt ggc agt gta tca ctc	768
Ala Gly His Leu Met Val Phe Leu Ile Phe Phe Gly Ser Val Ser Leu	
245 250 255	
atg tac ttg cgt ttc agc aac act tat cca cca gtt ttg gac aca gcc	816
Met Tyr Leu Arg Phe Ser Asn Thr Tyr Pro Pro Val Leu Asp Thr Ala	
260 265 270	
att gca ctg atg ttt act gta ctt gct cca ttc ttc aat ccc atc att	864
Ile Ala Leu Met Phe Thr Val Leu Ala Pro Phe Phe Asn Pro Ile Ile	

275 280 285
 tat agc ctg aga aac aag gac atg aac aat gca att aaa aaa ctg ttc 912
 Tyr Ser Leu Arg Asn Lys Asp Met Asn Asn Ala Ile Lys Lys Leu Phe
 290 295 300

 tgt ctt caa aaa gtg ttg aac aag cct gga ggt taa 948
 Cys Leu Gln Lys Val Leu Asn Lys Pro Gly Gly
 305 310 315

 <210> 260
 <211> 315
 <212> PRT
 <213> Homo Sapiens

 <400> 260

 Met Glu Ser Arg Asn Gln Ser Thr Val Thr Glu Phe Ile Phe Thr Gly
 1 5 10 15

 Phe Pro Gln Leu Gln Asp Gly Ser Leu Leu Tyr Phe Phe Pro Leu Leu
 20 25 30

 Phe Ile Tyr Thr Phe Ile Ile Ile Asp Asn Leu Leu Ile Phe Ser Ala
 35 40 45

 Val Arg Leu Asp Thr His Leu His Asn Pro Met Tyr Asn Phe Ile Ser
 50 55 60

 Ile Phe Ser Phe Leu Glu Ile Trp Tyr Thr Thr Ala Thr Ile Pro Lys
 65 70 75 80

 Met Leu Ser Asn Leu Ile Ser Glu Lys Lys Ala Ile Ser Met Thr Gly
 85 90 95

 Cys Ile Leu Gln Met Tyr Phe Phe His Ser Leu Glu Asn Ser Glu Gly
 100 105 110

 Ile Leu Leu Thr Thr Met Ala Ile Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

 Pro Leu Arg Tyr Gln Met Ile Met Thr Pro Arg Leu Cys Ala His Leu
 130 135 140

 Ser Ala Gly Ser Cys Leu Phe Gly Phe Leu Ile Leu Leu Pro Glu Ile
 145 150 155 160

 Val Met Ile Ser Thr Leu Pro Phe Cys Gly Pro Asn Gln Ile His Gln
 165 170 175

Ile Phe Cys Asp Leu Val Pro Val Leu Ser Leu Ala Cys Thr Asp Thr
 180 185 190

Ser Met Ile Leu Ile Glu Asp Val Ile His Ala Val Thr Ile Ile Ile
 195 200 205

Thr Phe Leu Ile Ile Ala Leu Ser Tyr Val Arg Ile Val Thr Val Ile
 210 215 220

Leu Arg Ile Pro Ser Ser Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys
 225 230 235 240

Ala Gly His Leu Met Val Phe Leu Ile Phe Phe Gly Ser Val Ser Leu
 245 250 255

Met Tyr Leu Arg Phe Ser Asn Thr Tyr Pro Pro Val Leu Asp Thr Ala
 260 265 270

Ile Ala Leu Met Phe Thr Val Leu Ala Pro Phe Phe Asn Pro Ile Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Asp Met Asn Asn Ala Ile Lys Lys Leu Phe
 290 295 300

Cys Leu Gln Lys Val Leu Asn Lys Pro Gly Gly
 305 310 315

<210> 261
 <211> 939
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (936)
 <223>

<400> 261
 atg gat gga gat aac cag agt gag aac tca cag ttc ctt ctc ctg ggg 48
 Met Asp Gly Asp Asn Gln Ser Glu Asn Ser Gln Phe Leu Leu Leu Gly
 1 5 10 15

atc tca gag agt cct gag cag cag cgg atc ctg ttt tgg atg ttc ctg 96
 Ile Ser Glu Ser Pro Glu Gln Gln Arg Ile Leu Phe Trp Met Phe Leu
 20 25 30

tcc atg tac ctg gtc acg gtg ctg gga aat gtg ctc atc atc ctg gcc 144
 Ser Met Tyr Leu Val Thr Val Leu Gly Asn Val Leu Ile Ile Leu Ala
 35 40 45

atc agc tct gat tcc cac ctg cac acc ccc atg tac ttc ttc ctg gcc Ile Ser Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ala 50 55 60	192
aac ctc tcc ttc act gac ctc ttc ttt gtc acc aac aca atc ccc aag Asn Leu Ser Phe Thr Asp Leu Phe Phe Val Thr Asn Thr Ile Pro Lys 65 70 75 80	240
atg ctg gtg aac ttc cag tcc cag aac aaa gcc atc tcc tat gca ggg Met Leu Val Asn Phe Gln Ser Gln Asn Lys Ala Ile Ser Tyr Ala Gly 85 90 95	288
tgt ctg aca cag ctc tac ttc ctg gtc tcc ttg gtg acc ctg gac aac Cys Leu Thr Gln Leu Tyr Phe Leu Val Ser Leu Val Thr Leu Asp Asn 100 105 110	336
ctc atc ctg gcc gtg atg gcg tat gat cgc tat gtg gcc acc tgc tgc Leu Ile Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Thr Cys Cys 115 120 125	384
ccc ctc cac tat gtc aca gcc atg agc cct ggg ctc tgt gtc ttg ctc Pro Leu His Tyr Val Thr Ala Met Ser Pro Gly Leu Cys Val Leu Leu 130 135 140	432
ctc tcc ttg tgt tgg ggg ctg tct gtt ctc tat ggc ctc ctc ctc acc Leu Ser Leu Cys Trp Gly Leu Ser Val Leu Tyr Gly Leu Leu Leu Thr 145 150 155 160	480
ttc ctc ctg acc agg gtg acc ttc tgt ggg cct cga gag atc cac tac Phe Leu Leu Thr Arg Val Thr Phe Cys Gly Pro Arg Glu Ile His Tyr 165 170 175	528
ctc ttc tgt gac atg tac atc ctg ctg tgg ctg gca tgt tcc aac acc Leu Phe Cys Asp Met Tyr Ile Leu Leu Trp Leu Ala Cys Ser Asn Thr 180 185 190	576
cac atc att cac aca gcg ttg att gcc act ggc tgc ttc atc ttc ctc His Ile Ile His Thr Ala Leu Ile Ala Thr Gly Cys Phe Ile Phe Leu 195 200 205	624
acc ccc tta ggg ttc atg acc aca tcc tat gta cgt att gtc aga acc Thr Pro Leu Gly Phe Met Thr Thr Ser Tyr Val Arg Ile Val Arg Thr 210 215 220	672
atc ctt caa atg ccc tcg gcc tct aag aaa tac aaa acc ttc tct acc Ile Leu Gln Met Pro Ser Ala Ser Lys Lys Tyr Lys Thr Phe Ser Thr 225 230 235 240	720
tgt gcc tcc cat ttg ggt gtg gtc tcc ctc ttt tat ggg acg ctt gct Cys Ala Ser His Leu Gly Val Val Ser Leu Phe Tyr Gly Thr Leu Ala 245 250 255	768
atg gtg tac ctg cag ccc ctc cat acc tac tcc atg aag gac tca gta Met Val Tyr Leu Gln Pro Leu His Thr Tyr Ser Met Lys Asp Ser Val 260 265 270	816
gcc aca gtg atg tat gct gtg ctg aca cct atg atg aac cct ttc atc Ala Thr Val Met Tyr Ala Val Leu Thr Pro Met Met Asn Pro Phe Ile 275 280 285	864
tac agg ctg agg aac aaa gac atg cat ggg gct ccg gga aga gtc cta	912

Tyr Arg Leu Arg Asn Lys Asp Met His Gly Ala Pro Gly Arg Val Leu
 290 295 300

tgg aga ccc ttt cag agg cct aaa tga
 Trp Arg Pro Phe Gln Arg Pro Lys
 305 310

939

<210> 262
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 262

Met Asp Gly Asp Asn Gln Ser Glu Asn Ser Gln Phe Leu Leu Leu Gly
 1 5 10 15

Ile Ser Glu Ser Pro Glu Gln Gln Arg Ile Leu Phe Trp Met Phe Leu
 20 25 30

Ser Met Tyr Leu Val Thr Val Leu Gly Asn Val Leu Ile Ile Leu Ala
 35 40 45

Ile Ser Ser Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ala
 50 55 60

Asn Leu Ser Phe Thr Asp Leu Phe Phe Val Thr Asn Thr Ile Pro Lys
 65 70 75 80

Met Leu Val Asn Phe Gln Ser Gln Asn Lys Ala Ile Ser Tyr Ala Gly
 85 90 95

Cys Leu Thr Gln Leu Tyr Phe Leu Val Ser Leu Val Thr Leu Asp Asn
 100 105 110

Leu Ile Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Thr Cys Cys
 115 120 125

Pro Leu His Tyr Val Thr Ala Met Ser Pro Gly Leu Cys Val Leu Leu
 130 135 140

Leu Ser Leu Cys Trp Gly Leu Ser Val Leu Tyr Gly Leu Leu Leu Thr
 145 150 155 160

Phe Leu Leu Thr Arg Val Thr Phe Cys Gly Pro Arg Glu Ile His Tyr
 165 170 175

Leu Phe Cys Asp Met Tyr Ile Leu Leu Trp Leu Ala Cys Ser Asn Thr
 180 185 190

His Ile Ile His Thr Ala Leu Ile Ala Thr Gly Cys Phe Ile Phe Leu
 195 200 205

Thr Pro Leu Gly Phe Met Thr Thr Ser Tyr Val Arg Ile Val Arg Thr
 210 215 220

Ile Leu Gln Met Pro Ser Ala Ser Lys Lys Tyr Lys Thr Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Leu Gly Val Val Ser Leu Phe Tyr Gly Thr Leu Ala
 245 250 255

Met Val Tyr Leu Gln Pro Leu His Thr Tyr Ser Met Lys Asp Ser Val
 260 265 270

Ala Thr Val Met Tyr Ala Val Leu Thr Pro Met Met Asn Pro Phe Ile
 275 280 285

Tyr Arg Leu Arg Asn Lys Asp Met His Gly Ala Pro Gly Arg Val Leu
 290 295 300

Trp Arg Pro Phe Gln Arg Pro Lys
 305 310

<210> 263
 <211> 894
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(891)
 <223>

<400> 263
 atg cag caa aat aac agt gtg cct gaa ttc ata ctg tta gga tta aca 48
 Met Gln Gln Asn Asn Ser Val Pro Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15
 cag gat ccc ttg agg cag aaa ata gtg ttt gta atc ttc tta att ttc 96
 Gln Asp Pro Leu Arg Gln Lys Ile Val Phe Val Ile Phe Leu Ile Phe
 20 25 30
 tat atg gga act gtg gtg ggg aat atg ctc att att gtg acc atc aag 144
 Tyr Met Gly Thr Val Val Gly Asn Met Leu Ile Ile Val Thr Ile Lys
 35 40 45
 tcc agc cgg aca cta gga agc ccc atg tac ttc ttt cta ttt tat ttg 192
 Ser Ser Arg Thr Leu Gly Ser Pro Met Tyr Phe Phe Leu Phe Tyr Leu
 50 55 60

tcc ttt gca gat tct tgc ttt tca act tcc aca gcc cct aga tta att	240
Ser Phe Ala Asp Ser Cys Phe Ser Thr Ser Thr Ala Pro Arg Leu Ile	
65 70 75 80	
gtg gat gct ctc tct gaa aag aaa att ata acc tac aat gag tgc atg	288
Val Asp Ala Leu Ser Glu Lys Lys Ile Ile Thr Tyr Asn Glu Cys Met	
85 90 95	
aca caa gtc ttt gca cta cat tta ttt ggc tgc atg gag atc ttt gtc	336
Thr Gln Val Phe Ala Leu His Leu Phe Gly Cys Met Glu Ile Phe Val	
100 105 110	
ctc att ctc atg gct gtt gat cgc tat gtg gcc atc tgt aag ccc ttg	384
Leu Ile Leu Met Ala Val Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu	
115 120 125	
cgt tac cca acc atc atg agc cag cag gtc tgc atc atc ctg att gtt	432
Arg Tyr Pro Thr Ile Met Ser Gln Gln Val Cys Ile Ile Leu Ile Val	
130 135 140	
ctt gcc tgg ata ggg tct tta ata cac tct aca gct cag att atc ctg	480
Leu Ala Trp Ile Gly Ser Leu Ile His Ser Thr Ala Gln Ile Ile Leu	
145 150 155 160	
gcc tta aga ttg cct ttc tgt gga ccc tat ttg att gat cat tat tgc	528
Ala Leu Arg Leu Pro Phe Cys Gly Pro Tyr Leu Ile Asp His Tyr Cys	
165 170 175	
tgt gat ttg cag ccc ttg ttg aaa ctt gcc tgc atg gac act tac atg	576
Cys Asp Leu Gln Pro Leu Leu Lys Leu Ala Cys Met Asp Thr Tyr Met	
180 185 190	
atc aac ctg ctg ttg gtg tct aac agt ggg gca att tgc tca agt agt	624
Ile Asn Leu Leu Leu Val Ser Asn Ser Gly Ala Ile Cys Ser Ser Ser	
195 200 205	
ttc atg att ttg ata att tca tat att gtc atc ttg cat tca ctg aga	672
Phe Met Ile Leu Ile Ile Ser Tyr Ile Val Ile Leu His Ser Leu Arg	
210 215 220	
aac cac agt gcc aaa ggg aag aaa aag gct ctc tcc gct tgc acg tct	720
Asn His Ser Ala Lys Gly Lys Lys Lys Ala Leu Ser Ala Cys Thr Ser	
225 230 235 240	
cac ata att gta gtc atc tta ttc ttt ggc cca tgt ata ttc ata tat	768
His Ile Ile Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe Ile Tyr	
245 250 255	
aca cgc ccc ccg acc act ttc ccc atg gac aag atg gtg gca gta ttt	816
Thr Arg Pro Pro Thr Thr Phe Pro Met Asp Lys Met Val Ala Val Phe	
260 265 270	
tat act att gga aca ccc ttt ctc aat cca ctc atc tac aca tct gag	864
Tyr Thr Ile Gly Thr Pro Phe Leu Asn Pro Leu Ile Tyr Thr Ser Glu	
275 280 285	
gaa tgc aga agt gaa aaa tgc cat gag aaa	894
Glu Cys Arg Ser Glu Lys Cys His Glu	
290 295	

<210> 264
 <211> 297
 <212> PRT
 <213> Homo Sapiens

<400> 264

Met Gln Gln Asn Asn Ser Val Pro Glu Phe Ile Leu Leu Gly Leu Thr
 1 5 10 15

Gln Asp Pro Leu Arg Gln Lys Ile Val Phe Val Ile Phe Leu Ile Phe
 20 25 30

Tyr Met Gly Thr Val Val Gly Asn Met Leu Ile Ile Val Thr Ile Lys
 35 40 45

Ser Ser Arg Thr Leu Gly Ser Pro Met Tyr Phe Phe Leu Phe Tyr Leu
 50 55 60

Ser Phe Ala Asp Ser Cys Phe Ser Thr Ser Thr Ala Pro Arg Leu Ile
 65 70 75 80

Val Asp Ala Leu Ser Glu Lys Lys Ile Ile Thr Tyr Asn Glu Cys Met
 85 90 95

Thr Gln Val Phe Ala Leu His Leu Phe Gly Cys Met Glu Ile Phe Val
 100 105 110

Leu Ile Leu Met Ala Val Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
 115 120 125

Arg Tyr Pro Thr Ile Met Ser Gln Gln Val Cys Ile Ile Leu Ile Val
 130 135 140

Leu Ala Trp Ile Gly Ser Leu Ile His Ser Thr Ala Gln Ile Ile Leu
 145 150 155 160

Ala Leu Arg Leu Pro Phe Cys Gly Pro Tyr Leu Ile Asp His Tyr Cys
 165 170 175

Cys Asp Leu Gln Pro Leu Leu Lys Leu Ala Cys Met Asp Thr Tyr Met
 180 185 190

Ile Asn Leu Leu Leu Val Ser Asn Ser Gly Ala Ile Cys Ser Ser Ser
 195 200 205

Phe Met Ile Leu Ile Ile Ser Tyr Ile Val Ile Leu His Ser Leu Arg

210	215	220
Asn His Ser Ala Lys Gly Lys Lys Lys Ala Leu Ser Ala Cys Thr Ser		
225	230	235 240
His Ile Ile Val Val Ile Leu Phe Phe Gly Pro Cys Ile Phe Ile Tyr		
	245	250 255
Thr Arg Pro Pro Thr Thr Phe Pro Met Asp Lys Met Val Ala Val Phe		
	260	265 270
Tyr Thr Ile Gly Thr Pro Phe Leu Asn Pro Leu Ile Tyr Thr Ser Glu		
	275	280 285
Glu Cys Arg Ser Glu Lys Cys His Glu		
290	295	

<210> 265
 <211> 915
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (915)
 <223>

<400> 265	
atg gaa aga gca aac cat tca gtg gta tcg gaa ttt att ttg ttg gga	48
Met Glu Arg Ala Asn His Ser Val Val Ser Glu Phe Ile Leu Leu Gly	
1 5 10 15	
ctt tcc aaa tct caa aat ctt cag att tta ttc ttc ttg gga ttc tct	96
Leu Ser Lys Ser Gln Asn Leu Gln Ile Leu Phe Phe Leu Gly Phe Ser	
20 25 30	
gtg gtc ttc gtg ggg att gtg tta gga aac ctg ctc atc ttg gtg act	144
Val Val Phe Val Gly Ile Val Leu Gly Asn Leu Leu Ile Leu Val Thr	
35 40 45	
gtg acc ttt gat tcg ctc ctt cac aca cca atg tat ttt ctg ctt agc	192
Val Thr Phe Asp Ser Leu Leu His Thr Pro Met Tyr Phe Leu Leu Ser	
50 55 60	
aac ctc tcc tgc att gat atg atc ctg gct tct ttt gct acc cct aag	240
Asn Leu Ser Cys Ile Asp Met Ile Leu Ala Ser Phe Ala Thr Pro Lys	
65 70 75 80	
atg att gta gat ttc ctc cga gaa cgt aag acc atc tca tgg tgg gga	288
Met Ile Val Asp Phe Leu Arg Glu Arg Lys Thr Ile Ser Trp Trp Gly	
85 90 95	
tgt tat tcc cag atg ttc ttt atg cac ctc ctg ggt ggg agt gag atg	336
Cys Tyr Ser Gln Met Phe Phe Met His Leu Leu Gly Gly Ser Glu Met	

100	105	110	
atg ttg ctt gta gcc atg gca ata gac agg tat gtt gcc ata tgc aaa			384
Met Leu Leu Val Ala Met Ala Ile Asp Arg Tyr Val Ala Ile Cys Lys			
115	120	125	
ccc ctc cat tac atg acc atc atg agc cca cgg gtg ctc act ggg cta			432
Pro Leu His Tyr Met Thr Ile Met Ser Pro Arg Val Leu Thr Gly Leu			
130	135	140	
ctg tta tcc tcc tat gca gtt gga ttt gtg cac tca tct agt caa atg			480
Leu Leu Ser Ser Tyr Ala Val Gly Phe Val His Ser Ser Ser Gln Met			
145	150	155	160
gct ttc atg ttg act ttg ccc ttc tgt ggt ccc aat gtt ata gac agc			528
Ala Phe Met Leu Thr Leu Pro Phe Cys Gly Pro Asn Val Ile Asp Ser			
165	170	175	
ttt ttc tgt gac ctt ccc ctt gtg att aaa ctt gcc tgc aag gac acc			576
Phe Phe Cys Asp Leu Pro Leu Val Ile Lys Leu Ala Cys Lys Asp Thr			
180	185	190	
tac atc cta cag ctc ctg gtc att gct gac agt ggg ctc ctg tca ctg			624
Tyr Ile Leu Gln Leu Leu Val Ile Ala Asp Ser Gly Leu Leu Ser Leu			
195	200	205	
gtc tgc ttc ctc ctc ttg ctt gtc tcc tat gga gtc ata ata ttc tca			672
Val Cys Phe Leu Leu Leu Val Ser Tyr Gly Val Ile Ile Phe Ser			
210	215	220	
gtt agg tac cgt gct gct agt cga tcc tct aag gct ttc tcc act ctc			720
Val Arg Tyr Arg Ala Ala Ser Arg Ser Ser Lys Ala Phe Ser Thr Leu			
225	230	235	240
tca gct cac atc aca gtt gtg act ctg ttc ttt gct ccg tgt gtc ttt			768
Ser Ala His Ile Thr Val Val Thr Leu Phe Phe Ala Pro Cys Val Phe			
245	250	255	
atc tac gtc tgg ccc ttc agc aga tac tgc gta gat aaa att ctt tct			816
Ile Tyr Val Trp Pro Phe Ser Arg Tyr Ser Val Asp Lys Ile Leu Ser			
260	265	270	
gtg ttt tac aca att ttc aca cct ctc tta aat cct att att tat aca			864
Val Phe Tyr Thr Ile Phe Thr Pro Leu Leu Asn Pro Ile Ile Tyr Thr			
275	280	285	
tta aga aat caa gag gta aaa gca gcc att aaa aaa aga ctc tgc ata			912
Leu Arg Asn Gln Glu Val Lys Ala Ala Ile Lys Lys Arg Leu Cys Ile			
290	295	300	
taa			915
<210> 266			
<211> 304			
<212> PRT			
<213> Homo Sapiens			
<400> 266			
Met Glu Arg Ala Asn His Ser Val Val Ser Glu Phe Ile Leu Leu Gly			

1	5	10	15
Leu Ser Lys Ser Gln Asn Leu Gln Ile Leu Phe Phe Leu Gly Phe Ser	20	25	30
Val Val Phe Val Gly Ile Val Leu Gly Asn Leu Leu Ile Leu Val Thr	35	40	45
Val Thr Phe Asp Ser Leu Leu His Thr Pro Met Tyr Phe Leu Leu Ser	50	55	60
Asn Leu Ser Cys Ile Asp Met Ile Leu Ala Ser Phe Ala Thr Pro Lys	65	70	75
Met Ile Val Asp Phe Leu Arg Glu Arg Lys Thr Ile Ser Trp Trp Gly	85	90	95
Cys Tyr Ser Gln Met Phe Phe Met His Leu Leu Gly Gly Ser Glu Met	100	105	110
Met Leu Leu Val Ala Met Ala Ile Asp Arg Tyr Val Ala Ile Cys Lys	115	120	125
Pro Leu His Tyr Met Thr Ile Met Ser Pro Arg Val Leu Thr Gly Leu	130	135	140
Leu Leu Ser Ser Tyr Ala Val Gly Phe Val His Ser Ser Ser Gln Met	145	150	155
Ala Phe Met Leu Thr Leu Pro Phe Cys Gly Pro Asn Val Ile Asp Ser	165	170	175
Phe Phe Cys Asp Leu Pro Leu Val Ile Lys Leu Ala Cys Lys Asp Thr	180	185	190
Tyr Ile Leu Gln Leu Leu Val Ile Ala Asp Ser Gly Leu Leu Ser Leu	195	200	205
Val Cys Phe Leu Leu Leu Leu Val Ser Tyr Gly Val Ile Ile Phe Ser	210	215	220
Val Arg Tyr Arg Ala Ala Ser Arg Ser Ser Lys Ala Phe Ser Thr Leu	225	230	235
Ser Ala His Ile Thr Val Val Thr Leu Phe Phe Ala Pro Cys Val Phe	245	250	255

Ile Tyr Val Trp Pro Phe Ser Arg Tyr Ser Val Asp Lys Ile Leu Ser
260 265 270

Val Phe Tyr Thr Ile Phe Thr Pro Leu Leu Asn Pro Ile Ile Tyr Thr
275 280 285

Leu Arg Asn Gln Glu Val Lys Ala Ala Ile Lys Lys Arg Leu Cys Ile
290 295 300

<210> 267

<211> 942

<212> DNA

<213> Homo Sapiens

<220>

<221> CDS

<222> (1) .. (939)

<223>

<400> 267

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Met Ala Asn Leu Ser Gln Pro Ser Glu Phe Val Leu Leu Gly Phe Ser
1 5 10 15

tcc ttt ggt gag ctg cag gcc ctt ctg tat ggc ccc ttc ctc atg ctt 96
Ser Phe Gly Glu Leu Gln Ala Leu Leu Tyr Gly Pro Phe Leu Met Leu
20 25 30

tat ctt ctc gcc ttc atg gga aac acc atc atc ata gtt atg gtc ata 144
Tyr Leu Leu Ala Phe Met Gly Asn Thr Ile Ile Ile Val Met Val Ile
35 40 45

gct gac acc cac cta cat aca ccc atg tac ttc ttc ctg ggc aat ttt 192
Ala Asp Thr His Leu His Thr Pro Met Tyr Phe Phe Leu Gly Asn Phe
50 55 60

tcc ctg ctg gag atc ttg gta acc atg act gca gtg ccc agg atg ctc 240
Ser Leu Leu Glu Ile Leu Val Thr Met Thr Ala Val Pro Arg Met Leu
65 70 75 80

tca gac ctg ttg gtc ccc cac aaa gtc att acc ttc act ggc tgc atg 288
Ser Asp Leu Leu Val Pro His Lys Val Ile Thr Phe Thr Gly Cys Met
85 90 95

gtc cag ttc tac ttc cac ttt tcc ctg ggg tcc acc tcc ttc ctc atc 336
Val Gln Phe Tyr Phe His Phe Ser Leu Gly Ser Thr Ser Phe Leu Ile
100 105 110

ctg aca gac atg gcc ctt gat cgc ttt gtg gcc atc tgc cac cca ctg 384
Leu Thr Asp Met Ala Leu Asp Arg Phe Val Ala Ile Cys His Pro Leu
115 120 125

cgc tat ggc act ctg atg agc cgg gct atg tgt gtc cag ctg gct ggg 432
Arg Tyr Gly Thr Leu Met Ser Arg Ala Met Cys Val Gln Leu Ala Gly
130 135 140

gct gcc tgg gca gct cct ttc cta gcc atg gta ccc act gtc ctc tcc 480
 Ala Ala Trp Ala Ala Pro Phe Leu Ala Met Val Pro Thr Val Leu Ser
 145 150 155 160

cga gct cat ctt gat tac tgc cat ggc gac gtc atc aac cac ttc ttc 528
 Arg Ala His Leu Asp Tyr Cys His Gly Asp Val Ile Asn His Phe Phe
 165 170 175

tgt gac aat gaa cct ctc ctg cag ttg tca tgc tct gac act cgc ctg 576
 Cys Asp Asn Glu Pro Leu Leu Gln Leu Ser Cys Ser Asp Thr Arg Leu
 180 185 190

ttg gaa ttc tgg gac ttt ctg atg gcc ttg acc ttt gtc ctc agc tcc 624
 Leu Glu Phe Trp Asp Phe Leu Met Ala Leu Thr Phe Val Leu Ser Ser
 195 200 205

ttc ctg gtg acc ctc atc tcc tat ggc tac ata gtg acc act gtg ctg 672
 Phe Leu Val Thr Leu Ile Ser Tyr Gly Tyr Ile Val Thr Thr Val Leu
 210 215 220

cgg atc ccc tct gcc agc agc tgc cag aag gct ttc tcc act tgc ggg 720
 Arg Ile Pro Ser Ala Ser Ser Cys Gln Lys Ala Phe Ser Thr Cys Gly
 225 230 235 240

tct cac ctc aca ctg gtc ttc atc ggc tac agt agt acc atc ttt ctg 768
 Ser His Leu Thr Leu Val Phe Ile Gly Tyr Ser Ser Thr Ile Phe Leu
 245 250 255

tat gtc agg cct ggc aaa gct cac tct gtg caa gtc agg aag gtc gtg 816
 Tyr Val Arg Pro Gly Lys Ala His Ser Val Gln Val Arg Lys Val Val
 260 265 270

gcc ttg gtg act tca gtt ctc acc ccc ttt ctc aat ccc ttt atc ctt 864
 Ala Leu Val Thr Ser Val Leu Thr Pro Phe Leu Asn Pro Phe Ile Leu
 275 280 285

acc ttc tgc aat cag aca gtt aaa aca gtg cta cag ggg cag atg cag 912
 Thr Phe Cys Asn Gln Thr Val Lys Thr Val Leu Gln Gly Gln Met Gln
 290 295 300

agg ctg aaa ggc ctt tgc aag gca caa tga 942
 Arg Leu Lys Gly Leu Cys Lys Ala Gln
 305 310

<210> 268
 <211> 313
 <212> PRT
 <213> Homo Sapiens

<400> 268

Met Ala Asn Leu Ser Gln Pro Ser Glu Phe Val Leu Leu Gly Phe Ser
 1 5 10 15

Ser Phe Gly Glu Leu Gln Ala Leu Leu Tyr Gly Pro Phe Leu Met Leu
 20 25 30

Tyr Leu Leu Ala Phe Met Gly Asn Thr Ile Ile Ile Val Met Val Ile
 35 40 45

Ala Asp Thr His Leu His Thr Pro Met Tyr Phe Phe Leu Gly Asn Phe
 50 55 60

Ser Leu Leu Glu Ile Leu Val Thr Met Thr Ala Val Pro Arg Met Leu
 65 70 75 80

Ser Asp Leu Leu Val Pro His Lys Val Ile Thr Phe Thr Gly Cys Met
 85 90 95

Val Gln Phe Tyr Phe His Phe Ser Leu Gly Ser Thr Ser Phe Leu Ile
 100 105 110

Leu Thr Asp Met Ala Leu Asp Arg Phe Val Ala Ile Cys His Pro Leu
 115 120 125

Arg Tyr Gly Thr Leu Met Ser Arg Ala Met Cys Val Gln Leu Ala Gly
 130 135 140

Ala Ala Trp Ala Ala Pro Phe Leu Ala Met Val Pro Thr Val Leu Ser
 145 150 155 160

Arg Ala His Leu Asp Tyr Cys His Gly Asp Val Ile Asn His Phe Phe
 165 170 175

Cys Asp Asn Glu Pro Leu Leu Gln Leu Ser Cys Ser Asp Thr Arg Leu
 180 185 190

Leu Glu Phe Trp Asp Phe Leu Met Ala Leu Thr Phe Val Leu Ser Ser
 195 200 205

Phe Leu Val Thr Leu Ile Ser Tyr Gly Tyr Ile Val Thr Thr Val Leu
 210 215 220

Arg Ile Pro Ser Ala Ser Ser Cys Gln Lys Ala Phe Ser Thr Cys Gly
 225 230 235 240

Ser His Leu Thr Leu Val Phe Ile Gly Tyr Ser Ser Thr Ile Phe Leu
 245 250 255

Tyr Val Arg Pro Gly Lys Ala His Ser Val Gln Val Arg Lys Val Val
 260 265 270

Ala Leu Val Thr Ser Val Leu Thr Pro Phe Leu Asn Pro Phe Ile Leu

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                275                280                285

Thr Phe Cys Asn Gln Thr Val Lys Thr Val Leu Gln Gly Gln Met Gln
 290                295                300

Arg Leu Lys Gly Leu Cys Lys Ala Gln
 305                310

<210> 269
<211> 930
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(930)
<223>

<400> 269
atg gac aac cac tct agt gcc act gaa ttc cac ctt cta ggc ttc cct      48
Met Asp Asn His Ser Ser Ala Thr Glu Phe His Leu Leu Gly Phe Pro
 1                5                10                15

ggg tcc caa gga cta cac cac att ctt ttt gct ata ttc ttt ttc ttc      96
Gly Ser Gln Gly Leu His His Ile Leu Phe Ala Ile Phe Phe Phe Phe
                20                25                30

tat tta gtg aca tta atg gga aac acg gtc atc att gtg att gtc tgt      144
Tyr Leu Val Thr Leu Met Gly Asn Thr Val Ile Ile Val Ile Val Cys
                35                40                45

gtg gat aaa cgt ctg cag tcc ccc atg tat ttc ttc ctc agc cac ctc      192
Val Asp Lys Arg Leu Gln Ser Pro Met Tyr Phe Phe Leu Ser His Leu
                50                55                60

tct acc ctg gag atc ctg gtc aca acc ata att gtc ccc atg atg ctt      240
Ser Thr Leu Glu Ile Leu Val Thr Thr Ile Ile Val Pro Met Met Leu
 65                70                75                80

tgg gga ttg ctc ttc ctg gga tgc aga cag tat ctt tct cta cat gta      288
Trp Gly Leu Leu Phe Leu Gly Cys Arg Gln Tyr Leu Ser Leu His Val
                85                90                95

tcg ctc aac ttt tcc tgt ggg acc atg gag ttt gca tta ctt gga gtg      336
Ser Leu Asn Phe Ser Cys Gly Thr Met Glu Phe Ala Leu Leu Gly Val
                100                105                110

atg gct gtg gac cgt tat gtg gct gtg tgt aac cct ttg agg tac aac      384
Met Ala Val Asp Arg Tyr Val Ala Val Cys Asn Pro Leu Arg Tyr Asn
                115                120                125

atc att atg aac agc agt acc tgt att tgg gtg gta ata gtg tca tgg      432
Ile Ile Met Asn Ser Ser Thr Cys Ile Trp Val Val Ile Val Ser Trp
                130                135                140

gtg ttt gga ttt ctt tct gaa atc tgg ccc atc tat gcc aca ttt cag      480
Val Phe Gly Phe Leu Ser Glu Ile Trp Pro Ile Tyr Ala Thr Phe Gln

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145	150	155	160	
ttt acc ttc cgc aaa tca aat tca tta gac cat ttt tac tgt gac cga				528
Phe Thr Phe Arg Lys Ser Asn Ser Leu Asp His Phe Tyr Cys Asp Arg				
	165	170	175	
ggg caa ttg ctc aaa ctg tcc tgc gat aac act ctt ctc aca gag ttt				576
Gly Gln Leu Leu Lys Leu Ser Cys Asp Asn Thr Leu Leu Thr Glu Phe				
	180	185	190	
atc ctt ttc tta atg gct gtt ttt att ctc att ggt tct ttg atc cct				624
Ile Leu Phe Leu Met Ala Val Phe Ile Leu Ile Gly Ser Leu Ile Pro				
	195	200	205	
acg att gtc tcc tac acc tac att atc tcc acc atc ctc aag atc ccg				672
Thr Ile Val Ser Tyr Thr Tyr Ile Ile Ser Thr Ile Leu Lys Ile Pro				
	210	215	220	
tca gcc tct ggc cgg agg aaa gcc ttc tcc act ttt gcc tcc cac ttc				720
Ser Ala Ser Gly Arg Arg Lys Ala Phe Ser Thr Phe Ala Ser His Phe				
	225	230	235	240
acc tgt gtt gtg att ggc tat ggc agc tgc ttg ttt ctc tac gtg aaa				768
Thr Cys Val Val Ile Gly Tyr Gly Ser Cys Leu Phe Leu Tyr Val Lys				
	245	250	255	
ccc aag caa aca cag gga gtt gag tac aat aag ata gtt tcc ctg ttg				816
Pro Lys Gln Thr Gln Gly Val Glu Tyr Asn Lys Ile Val Ser Leu Leu				
	260	265	270	
gtt tct gtg tta acc ccc ttc ctg aat cct ttc atc ttt act ctt cgg				864
Val Ser Val Leu Thr Pro Phe Leu Asn Pro Phe Ile Phe Thr Leu Arg				
	275	280	285	
aat gac aaa gtc aaa gag gcc ctc cga gat ggg atg aaa cgc tgc tgt				912
Asn Asp Lys Val Lys Glu Ala Leu Arg Asp Gly Met Lys Arg Cys Cys				
	290	295	300	
caa ctc ctg aaa gat tag				930
Gln Leu Leu Lys Asp				
305				

<210> 270

<211> 309

<212> PRT

<213> Homo Sapiens

<400> 270

Met Asp Asn His Ser Ser Ala Thr Glu Phe His Leu Leu Gly Phe Pro			
1	5	10	15

Gly Ser Gln Gly Leu His His Ile Leu Phe Ala Ile Phe Phe Phe Phe			
20	25	30	

Tyr Leu Val Thr Leu Met Gly Asn Thr Val Ile Ile Val Ile Val Cys			
35	40	45	

Val Asp Lys Arg Leu Gln Ser Pro Met Tyr Phe Phe Leu Ser His Leu
 50 55 60

Ser Thr Leu Glu Ile Leu Val Thr Thr Ile Ile Val Pro Met Met Leu
 65 70 75 80

Trp Gly Leu Leu Phe Leu Gly Cys Arg Gln Tyr Leu Ser Leu His Val
 85 90 95

Ser Leu Asn Phe Ser Cys Gly Thr Met Glu Phe Ala Leu Leu Gly Val
 100 105 110

Met Ala Val Asp Arg Tyr Val Ala Val Cys Asn Pro Leu Arg Tyr Asn
 115 120 125

Ile Ile Met Asn Ser Ser Thr Cys Ile Trp Val Val Ile Val Ser Trp
 130 135 140

Val Phe Gly Phe Leu Ser Glu Ile Trp Pro Ile Tyr Ala Thr Phe Gln
 145 150 155 160

Phe Thr Phe Arg Lys Ser Asn Ser Leu Asp His Phe Tyr Cys Asp Arg
 165 170 175

Gly Gln Leu Leu Lys Leu Ser Cys Asp Asn Thr Leu Leu Thr Glu Phe
 180 185 190

Ile Leu Phe Leu Met Ala Val Phe Ile Leu Ile Gly Ser Leu Ile Pro
 195 200 205

Thr Ile Val Ser Tyr Thr Tyr Ile Ile Ser Thr Ile Leu Lys Ile Pro
 210 215 220

Ser Ala Ser Gly Arg Arg Lys Ala Phe Ser Thr Phe Ala Ser His Phe
 225 230 235 240

Thr Cys Val Val Ile Gly Tyr Gly Ser Cys Leu Phe Leu Tyr Val Lys
 245 250 255

Pro Lys Gln Thr Gln Gly Val Glu Tyr Asn Lys Ile Val Ser Leu Leu
 260 265 270

Val Ser Val Leu Thr Pro Phe Leu Asn Pro Phe Ile Phe Thr Leu Arg
 275 280 285

Asn Asp Lys Val Lys Glu Ala Leu Arg Asp Gly Met Lys Arg Cys Cys
 290 295 300

Gln Leu Leu Lys Asp
 305

<210> 271
 <211> 948
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(948)
 <223>

<400> 271
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 Met Gln Gly Leu Asn His Thr Ser Val Ser Glu Phe Ile Leu Val Gly
 1 5 10 15
 ttc tct gcc ttc ccc cac ctc cag ctg atg ctc ttc ctg ctg ttc ctg 96
 Phe Ser Ala Phe Pro His Leu Gln Leu Met Leu Phe Leu Leu Phe Leu
 20 25 30
 ctg atg tac ctg ttc acg ctg ctg ggc aac ctg ctc atc atg gcc act 144
 Leu Met Tyr Leu Phe Thr Leu Leu Gly Asn Leu Leu Ile Met Ala Thr
 35 40 45
 gtc tgg agc gag cgc agc ctc cac atg ccc atg tac ctc ttc ctg tgt 192
 Val Trp Ser Glu Arg Ser Leu His Met Pro Met Tyr Leu Phe Leu Cys
 50 55 60
 gcc ctc tcc atc acc gag atc ctc tac acc gtg gcc atc atc ccg cgc 240
 Ala Leu Ser Ile Thr Glu Ile Leu Tyr Thr Val Ala Ile Ile Pro Arg
 65 70 75 80
 atg ctg gcc gac ctg ctg tcc acc cag cgc tcc atc gcc ttc ctg gcc 288
 Met Leu Ala Asp Leu Leu Ser Thr Gln Arg Ser Ile Ala Phe Leu Ala
 85 90 95
 tgt gcc agt cag atg ttc ttc tcc ttc agc ttc ggc ttc acc cac tcc 336
 Cys Ala Ser Gln Met Phe Phe Ser Phe Ser Phe Gly Phe Thr His Ser
 100 105 110
 ttc ctg ctc act gtc atg ggc tac gac cgc tac gtg gcc atc tgc cac 384
 Phe Leu Leu Thr Val Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 ccc ctg cgt tac aac gtg ctc atg agc ctg cgg gcc tgc acc tgc cgg 432
 Pro Leu Arg Tyr Asn Val Leu Met Ser Leu Arg Gly Cys Thr Cys Arg
 130 135 140
 gtg ggc tgc tcc tgg gct ggt ggc ttg gtc atg ggg atg gtg gtg acc 480
 Val Gly Cys Ser Trp Ala Gly Gly Leu Val Met Gly Met Val Val Thr
 145 150 155 160
 tcg gcc att ttc cac ctc gcc ttc tgt gga cac aag gag atc cac cat 528

Ser Ala Ile Phe His Leu Ala Phe Cys Gly His Lys Glu Ile His His
 165 170 175
 ttc ttc tgc cac gtg cca cct ctg ttg aag ttg gcc tgt gga gat gat 576
 Phe Phe Cys His Val Pro Pro Leu Leu Lys Leu Ala Cys Gly Asp Asp
 180 185 190
 gtg ctg gtg gtg gcc aaa ggc gtg ggc ttg gtg tgt atc acg gcc ctg 624
 Val Leu Val Val Ala Lys Gly Val Gly Leu Val Cys Ile Thr Ala Leu
 195 200 205
 ctg ggc tgt ttt ctc ctc atc ctc ctc tcc tat gcc ttc atc gtg gcc 672
 Leu Gly Cys Phe Leu Leu Ile Leu Leu Ser Tyr Ala Phe Ile Val Ala
 210 215 220
 gcc atc ttg aag atc cct tct gct gaa ggt cgg aac aag gcc ttc tcc 720
 Ala Ile Leu Lys Ile Pro Ser Ala Glu Gly Arg Asn Lys Ala Phe Ser
 225 230 235 240
 acc tgt gcc tct cac ctc act gtg gtg gtc gtg cac tat ggc ttt gcc 768
 Thr Cys Ala Ser His Leu Thr Val Val Val Val His Tyr Gly Phe Ala
 245 250 255
 tcc gtc att tac ctg aag ccc aaa ggt ccc cag tct ccg gaa gga gac 816
 Ser Val Ile Tyr Leu Lys Pro Lys Gly Pro Gln Ser Pro Glu Gly Asp
 260 265 270
 acc ttg atg ggc atc acc tac acg gtc ctc aca ccc ttc ctc agc ccc 864
 Thr Leu Met Gly Ile Thr Tyr Thr Val Leu Thr Pro Phe Leu Ser Pro
 275 280 285
 atc atc ttc agc ctc agg aac aag gag ctg aag gtc gcc atg aag aag 912
 Ile Ile Phe Ser Leu Arg Asn Lys Glu Leu Lys Val Ala Met Lys Lys
 290 295 300
 act tgc ttc acc aaa ctc ttt cca cag aac tgc tga 948
 Thr Cys Phe Thr Lys Leu Phe Pro Gln Asn Cys
 305 310 315

<210> 272
 <211> 315
 <212> PRT
 <213> Homo Sapiens

<400> 272

Met Gln Gly Leu Asn His Thr Ser Val Ser Glu Phe Ile Leu Val Gly
 1 5 10 15
 Phe Ser Ala Phe Pro His Leu Gln Leu Met Leu Phe Leu Leu Phe Leu
 20 25 30
 Leu Met Tyr Leu Phe Thr Leu Leu Gly Asn Leu Leu Ile Met Ala Thr
 35 40 45
 Val Trp Ser Glu Arg Ser Leu His Met Pro Met Tyr Leu Phe Leu Cys
 50 55 60

Ala Leu Ser Ile Thr Glu Ile Leu Tyr Thr Val Ala Ile Ile Pro Arg
65 70 75 80

Met Leu Ala Asp Leu Leu Ser Thr Gln Arg Ser Ile Ala Phe Leu Ala
85 90 95

Cys Ala Ser Gln Met Phe Phe Ser Phe Ser Phe Gly Phe Thr His Ser
100 105 110

Phe Leu Leu Thr Val Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Leu Arg Tyr Asn Val Leu Met Ser Leu Arg Gly Cys Thr Cys Arg
130 135 140

Val Gly Cys Ser Trp Ala Gly Gly Leu Val Met Gly Met Val Val Thr
145 150 155 160

Ser Ala Ile Phe His Leu Ala Phe Cys Gly His Lys Glu Ile His His
165 170 175

Phe Phe Cys His Val Pro Pro Leu Leu Lys Leu Ala Cys Gly Asp Asp
180 185 190

Val Leu Val Val Ala Lys Gly Val Gly Leu Val Cys Ile Thr Ala Leu
195 200 205

Leu Gly Cys Phe Leu Leu Ile Leu Leu Ser Tyr Ala Phe Ile Val Ala
210 215 220

Ala Ile Leu Lys Ile Pro Ser Ala Glu Gly Arg Asn Lys Ala Phe Ser
225 230 235 240

Thr Cys Ala Ser His Leu Thr Val Val Val Val His Tyr Gly Phe Ala
245 250 255

Ser Val Ile Tyr Leu Lys Pro Lys Gly Pro Gln Ser Pro Glu Gly Asp
260 265 270

Thr Leu Met Gly Ile Thr Tyr Thr Val Leu Thr Pro Phe Leu Ser Pro
275 280 285

Ile Ile Phe Ser Leu Arg Asn Lys Glu Leu Lys Val Ala Met Lys Lys
290 295 300

Thr Cys Phe Thr Lys Leu Phe Pro Gln Asn Cys
305 310 315

<210> 273
<211> 936
<212> DNA
<213> Homo Sapiens

<220>
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<222> (1)..(933)
<223>

<400> 273
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Met Glu Lys Ile Asn Asn Val Thr Glu Phe Ile Phe Trp Gly Leu Ser
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cag agc cca gag att gag aaa gtt tgt ttt gtg gtg ttt tct ttc ttc 96
Gln Ser Pro Glu Ile Glu Lys Val Cys Phe Val Val Phe Ser Phe Phe
20 25 30
tac ata atc att ctt ctg gga aat ctc ctc atc atg ctg aca gtt tgc 144
Tyr Ile Ile Ile Leu Leu Gly Asn Leu Leu Ile Met Leu Thr Val Cys
35 40 45
ctg agc aac ctg ttt aag tca ccc atg tat ttc ttt ctc agc ttc ttg 192
Leu Ser Asn Leu Phe Lys Ser Pro Met Tyr Phe Phe Leu Ser Phe Leu
50 55 60
tct ttt gtg gac att tgt tac tct tca gtc aca gct ccc aag atg att 240
Ser Phe Val Asp Ile Cys Tyr Ser Ser Val Thr Ala Pro Lys Met Ile
65 70 75 80
gtt gac ctg tta gca aag gac aaa acc atc tcc tat gtg ggg tgc atg 288
Val Asp Leu Leu Ala Lys Asp Lys Thr Ile Ser Tyr Val Gly Cys Met
85 90 95
ttg caa ctg ctt gga gta cat ttc ttt ggt tgc act gag atc ttc atc 336
Leu Gln Leu Leu Gly Val His Phe Phe Gly Cys Thr Glu Ile Phe Ile
100 105 110
ctt act gta atg gcc tat gat cgt tat gtg gct atc tgt aaa ccc cta 384
Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu
115 120 125
cat tat atg acc atc atg aac cgg gag aca tgc aat aaa atg tta tta 432
His Tyr Met Thr Ile Met Asn Arg Glu Thr Cys Asn Lys Met Leu Leu
130 135 140
ggg acg tgg gta ggt ggg ttc tta cac tcc att atc caa gtg gct ctg 480
Gly Thr Trp Val Gly Gly Phe Leu His Ser Ile Ile Gln Val Ala Leu
145 150 155 160
gta gtc caa cta ccc ttt tgt gga ccc aat gag ata gat cac tac ttt 528
Val Val Gln Leu Pro Phe Cys Gly Pro Asn Glu Ile Asp His Tyr Phe
165 170 175

tgt gat gtt cac cct gtg ttg aaa ctt gcc tgc aca gaa aca tac att 576
 Cys Asp Val His Pro Val Leu Lys Leu Ala Cys Thr Glu Thr Tyr Ile
 180 185 190

gtt ggt gtt gtt gtg aca gcc aac agt ggt acc att gct ctg ggg agt 624
 Val Gly Val Val Val Thr Ala Asn Ser Gly Thr Ile Ala Leu Gly Ser
 195 200 205

ttt gtt atc ttg cta atc tcc tac agc atc atc cta gtt tcc ctg aga 672
 Phe Val Ile Leu Leu Ile Ser Tyr Ser Ile Ile Leu Val Ser Leu Arg
 210 215 220

aag cag tca gca gaa ggc agg cgc aaa gcc ctc tcc acc tgt ggc tcc 720
 Lys Gln Ser Ala Glu Gly Arg Arg Lys Ala Leu Ser Thr Cys Gly Ser
 225 230 235 240

cac att gcc atg gtc gtt atc ttt ttc ggc ccc tgt act ttt atg tac 768
 His Ile Ala Met Val Val Ile Phe Phe Gly Pro Cys Thr Phe Met Tyr
 245 250 255

atg cgc cct gat acg acc ttt tca gag gat aag atg gtg gct gta ttt 816
 Met Arg Pro Asp Thr Thr Phe Ser Glu Asp Lys Met Val Ala Val Phe
 260 265 270

tac acc att atc act ccc atg tta aat cct ctg att tat aca ctg aga 864
 Tyr Thr Ile Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg
 275 280 285

aat gca gaa gta aag aat gca atg aag aaa ctg tgg ggc aga aat gtt 912
 Asn Ala Glu Val Lys Asn Ala Met Lys Lys Leu Trp Gly Arg Asn Val
 290 295 300

ttc ttg gag gct aaa ggg aaa tag 936
 Phe Leu Glu Ala Lys Gly Lys
 305 310

<210> 274

<211> 311

<212> PRT

<213> Homo Sapiens

<400> 274

Met Glu Lys Ile Asn Asn Val Thr Glu Phe Ile Phe Trp Gly Leu Ser
1 5 10 15

Gln Ser Pro Glu Ile Glu Lys Val Cys Phe Val Val Phe Ser Phe Phe
20 25 30

Tyr Ile Ile Ile Leu Leu Gly Asn Leu Leu Ile Met Leu Thr Val Cys
35 40 45

Leu Ser Asn Leu Phe Lys Ser Pro Met Tyr Phe Phe Leu Ser Phe Leu
50 55 60

Ser Phe Val Asp Ile Cys Tyr Ser Ser Val Thr Ala Pro Lys Met Ile

65		70		75		80
Val Asp Leu Leu Ala Lys Asp Lys Thr Ile Ser Tyr Val Gly Cys Met	85		90		95	
Leu Gln Leu Leu Gly Val His Phe Phe Gly Cys Thr Glu Ile Phe Ile	100		105		110	
Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu	115		120		125	
His Tyr Met Thr Ile Met Asn Arg Glu Thr Cys Asn Lys Met Leu Leu	130		135		140	
Gly Thr Trp Val Gly Gly Phe Leu His Ser Ile Ile Gln Val Ala Leu	145		150		155	160
Val Val Gln Leu Pro Phe Cys Gly Pro Asn Glu Ile Asp His Tyr Phe	165		170		175	
Cys Asp Val His Pro Val Leu Lys Leu Ala Cys Thr Glu Thr Tyr Ile	180		185		190	
Val Gly Val Val Val Thr Ala Asn Ser Gly Thr Ile Ala Leu Gly Ser	195		200		205	
Phe Val Ile Leu Leu Ile Ser Tyr Ser Ile Ile Leu Val Ser Leu Arg	210		215		220	
Lys Gln Ser Ala Glu Gly Arg Arg Lys Ala Leu Ser Thr Cys Gly Ser	225		230		235	240
His Ile Ala Met Val Val Ile Phe Phe Gly Pro Cys Thr Phe Met Tyr	245		250		255	
Met Arg Pro Asp Thr Thr Phe Ser Glu Asp Lys Met Val Ala Val Phe	260		265		270	
Tyr Thr Ile Ile Thr Pro Met Leu Asn Pro Leu Ile Tyr Thr Leu Arg	275		280		285	
Asn Ala Glu Val Lys Asn Ala Met Lys Lys Leu Trp Gly Arg Asn Val	290		295		300	
Phe Leu Glu Ala Lys Gly Lys	305		310			

<210> 275
 <211> 930
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(927)
 <223>

<400> 275
 atg aat cac tct gtg gta tca gaa ttt gta ttc atg gga ctc acc aac 48
 Met Asn His Ser Val Val Ser Glu Phe Val Phe Met Gly Leu Thr Asn
 1 5 10 15
 tca cgg gag att cag ctt cta ctt ttt gtt ttc tct ttg ttg ttc tac 96
 Ser Arg Glu Ile Gln Leu Leu Leu Phe Val Phe Ser Leu Leu Phe Tyr
 20 25 30
 ttt gcg agc atg atg gga aac ctt gtc att gta ttc act gta acc atg 144
 Phe Ala Ser Met Met Gly Asn Leu Val Ile Val Phe Thr Val Thr Met
 35 40 45
 gat gct cat ctg cac tcc ccc atg tat ttc ctc ctg gct aac ctc tca 192
 Asp Ala His Leu His Ser Pro Met Tyr Phe Leu Leu Ala Asn Leu Ser
 50 55 60
 atc att gat atg gca ttt tgc tca att aca gcc cct aag atg att tgt 240
 Ile Ile Asp Met Ala Phe Cys Ser Ile Thr Ala Pro Lys Met Ile Cys
 65 70 75 80
 gat att ttc aag aag cac aag gcc atc tcc ttt cgg gga tgt att act 288
 Asp Ile Phe Lys Lys His Lys Ala Ile Ser Phe Arg Gly Cys Ile Thr
 85 90 95
 cag atc ttc ttt agc cat gct ctt ggg ggc act gag atg gtg ctg ctc 336
 Gln Ile Phe Phe Ser His Ala Leu Gly Gly Thr Glu Met Val Leu Leu
 100 105 110
 ata gcc atg gcc ttt gac aga tac atg gcc ata tgt aaa cct ctc cac 384
 Ile Ala Met Ala Phe Asp Arg Tyr Met Ala Ile Cys Lys Pro Leu His
 115 120 125
 tac ctg acc atc atg agc cca aga atg tgt cta tac ttt tta gcc act 432
 Tyr Leu Thr Ile Met Ser Pro Arg Met Cys Leu Tyr Phe Leu Ala Thr
 130 135 140
 tcc tct atc att ggc ctt atc cac tca ttg gtc caa tta gtt ttt gtg 480
 Ser Ser Ile Ile Gly Leu Ile His Ser Leu Val Gln Leu Val Phe Val
 145 150 155 160
 gta gat tta cct ttt tgt ggt cct aat atc ttt gac agt ttt tac tgt 528
 Val Asp Leu Pro Phe Cys Gly Pro Asn Ile Phe Asp Ser Phe Tyr Cys
 165 170 175
 gat ctc cct cgg ctc ctc aga ctt gcc tgt acc aac acc caa gaa ctg 576
 Asp Leu Pro Arg Leu Leu Arg Leu Ala Cys Thr Asn Thr Gln Glu Leu
 180 185 190

gag ttc atg gtc act gtc aat agt gga ctc att tct gtg ggc tcc ttt 624
 Glu Phe Met Val Thr Val Asn Ser Gly Leu Ile Ser Val Gly Ser Phe
 195 200 205
 gtc ttg ctg gta att tcc tac atc ttc att ctg ttc act gtt tgg aaa 672
 Val Leu Leu Val Ile Ser Tyr Ile Phe Ile Leu Phe Thr Val Trp Lys
 210 215 220
 cat tct tct ggt ggt cta gcc aag gcc ctc tct acc ctg tca gct cat 720
 His Ser Ser Gly Gly Leu Ala Lys Ala Leu Ser Thr Leu Ser Ala His
 225 230 235 240
 gtc act gtg gtc atc ttg ttc ttt ggg cca ctg atg ttt ttc tac aca 768
 Val Thr Val Val Ile Leu Phe Phe Gly Pro Leu Met Phe Phe Tyr Thr
 245 250 255
 tgg cct tct ccc aca tca cac ctg gat aaa tat ctt gct att ttt gat 816
 Trp Pro Ser Pro Thr Ser His Leu Asp Lys Tyr Leu Ala Ile Phe Asp
 260 265 270
 gca ttt att act cct ttt ctg aat cca gtt atc tac aca ttc agg aac 864
 Ala Phe Ile Thr Pro Phe Leu Asn Pro Val Ile Tyr Thr Phe Arg Asn
 275 280 285
 aaa gac atg aaa gtg gca atg agg aga ctg tgc agt cgt ctt gcg cat 912
 Lys Asp Met Lys Val Ala Met Arg Arg Leu Cys Ser Arg Leu Ala His
 290 295 300
 ttt aca aag att ttg taa 930
 Phe Thr Lys Ile Leu
 305

<210> 276
 <211> 309
 <212> PRT
 <213> Homo Sapiens

<400> 276

Met Asn His Ser Val Val Ser Glu Phe Val Phe Met Gly Leu Thr Asn
1 5 10 15

Ser Arg Glu Ile Gln Leu Leu Leu Phe Val Phe Ser Leu Leu Phe Tyr
20 25 30

Phe Ala Ser Met Met Gly Asn Leu Val Ile Val Phe Thr Val Thr Met
35 40 45

Asp Ala His Leu His Ser Pro Met Tyr Phe Leu Leu Ala Asn Leu Ser
50 55 60

Ile Ile Asp Met Ala Phe Cys Ser Ile Thr Ala Pro Lys Met Ile Cys
65 70 75 80

Asp Ile Phe Lys Lys His Lys Ala Ile Ser Phe Arg Gly Cys Ile Thr
85 90 95

Gln Ile Phe Phe Ser His Ala Leu Gly Gly Thr Glu Met Val Leu Leu
100 105 110

Ile Ala Met Ala Phe Asp Arg Tyr Met Ala Ile Cys Lys Pro Leu His
115 120 125

Tyr Leu Thr Ile Met Ser Pro Arg Met Cys Leu Tyr Phe Leu Ala Thr
130 135 140

Ser Ser Ile Ile Gly Leu Ile His Ser Leu Val Gln Leu Val Phe Val
145 150 155 160

Val Asp Leu Pro Phe Cys Gly Pro Asn Ile Phe Asp Ser Phe Tyr Cys
165 170 175

Asp Leu Pro Arg Leu Leu Arg Leu Ala Cys Thr Asn Thr Gln Glu Leu
180 185 190

Glu Phe Met Val Thr Val Asn Ser Gly Leu Ile Ser Val Gly Ser Phe
195 200 205

Val Leu Leu Val Ile Ser Tyr Ile Phe Ile Leu Phe Thr Val Trp Lys
210 215 220

His Ser Ser Gly Gly Leu Ala Lys Ala Leu Ser Thr Leu Ser Ala His
225 230 235 240

Val Thr Val Val Ile Leu Phe Phe Gly Pro Leu Met Phe Phe Tyr Thr
245 250 255

Trp Pro Ser Pro Thr Ser His Leu Asp Lys Tyr Leu Ala Ile Phe Asp
260 265 270

Ala Phe Ile Thr Pro Phe Leu Asn Pro Val Ile Tyr Thr Phe Arg Asn
275 280 285

Lys Asp Met Lys Val Ala Met Arg Arg Leu Cys Ser Arg Leu Ala His
290 295 300

Phe Thr Lys Ile Leu
305

<210> 277

<211> 876
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (873)
 <223>

<400> 277
 atg gtt ggg gca aat cac tcc gtg gtg tca gag ttt gtg ttc ctg gga 48
 Met Val Gly Ala Asn His Ser Val Val Ser Glu Phe Val Phe Leu Gly
 1 5 10 15
 ctc acc aat tcc tgg gag atc cga ctt ctc ctc ctt gtg ttc tcc tcc 96
 Leu Thr Asn Ser Trp Glu Ile Arg Leu Leu Leu Leu Val Phe Ser Ser
 20 25 30
 atg ttt tac atg gcc agt atg atg gga aac tct ctc att ttg ctc act 144
 Met Phe Tyr Met Ala Ser Met Met Gly Asn Ser Leu Ile Leu Leu Thr
 35 40 45
 gtg act tct gac cct cac ttg cac tcc ccc atg tat ttt ctg tta gcc 192
 Val Thr Ser Asp Pro His Leu His Ser Pro Met Tyr Phe Leu Leu Ala
 50 55 60
 aac ctc tcc ttc att gac ctg ggt gtt tcc tct gtc act tct ccc aaa 240
 Asn Leu Ser Phe Ile Asp Leu Gly Val Ser Ser Val Thr Ser Pro Lys
 65 70 75 80
 atg att tat gac ctg ttc aga aag cac gaa gtc atc tcc ttt gga ggc 288
 Met Ile Tyr Asp Leu Phe Arg Lys His Glu Val Ile Ser Phe Gly Gly
 85 90 95
 tgc atc gct caa atc ttc ttc atc cac gtc att ggc ggt gtg gag atg 336
 Cys Ile Ala Gln Ile Phe Phe Ile His Val Ile Gly Gly Val Glu Met
 100 105 110
 gtg ctg ctc ata gcc atg gcc ttt gac aga tat gtg gcc ata tgt aag 384
 Val Leu Leu Ile Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125
 ccc ctc cag tac ctg acc att atg agc cca aga atg tgc atg ttc ttc 432
 Pro Leu Gln Tyr Leu Thr Ile Met Ser Pro Arg Met Cys Met Phe Phe
 130 135 140
 tta gtg gct gcc tgg gtg acc ggc ctt atc cac tct gta gtt caa ttg 480
 Leu Val Ala Ala Trp Val Thr Gly Leu Ile His Ser Val Val Gln Leu
 145 150 155 160
 gtt ttt gta gta aac ttg ccc ttc tgt ggt cct aat gta tcg gac agc 528
 Val Phe Val Val Asn Leu Pro Phe Cys Gly Pro Asn Val Ser Asp Ser
 165 170 175
 ttt tac tgt gac ctt cct cgg ttc atc aaa ctt gcc tgc aca gac agc 576
 Phe Tyr Cys Asp Leu Pro Arg Phe Ile Lys Leu Ala Cys Thr Asp Ser
 180 185 190
 tac cga ctg gag ttc atg gtt aca gcc aac agt gga ttc atc tct ctg 624
 Tyr Arg Leu Glu Phe Met Val Thr Ala Asn Ser Gly Phe Ile Ser Leu

195	200	205	
ggc tcc ttc ttc ata ctg atc att tcc tat gtg gtc atc att ctc act			672
Gly Ser Phe Phe Ile Leu Ile Ile Ser Tyr Val Val Ile Ile Leu Thr			
210	215	220	
gtt ctg aaa cac tct tca gct ggt tta tcc aag gct ctg tcc acc ctt			720
Val Leu Lys His Ser Ser Ala Gly Leu Ser Lys Ala Leu Ser Thr Leu			
225	230	235	240
tca gct cac gtc agt gtg gta gtt ttg ttc ttt ggt cct ttg att ttt			768
Ser Ala His Val Ser Val Val Val Leu Phe Phe Gly Pro Leu Ile Phe			
245	250	255	
gtc tat acg tgg cca tct ccc tcc aca cac ctg gat aag ttt ctg gcc			816
Val Tyr Thr Trp Pro Ser Pro Ser Thr His Leu Asp Lys Phe Leu Ala			
260	265	270	
atc ttt gat gca gtt ctc act cct gtt tta aat cct atc atc tac aca			864
Ile Phe Asp Ala Val Leu Thr Pro Val Leu Asn Pro Ile Ile Tyr Thr			
275	280	285	
ttc agg aat tga			876
Phe Arg Asn			
290			

<210> 278
 <211> 291
 <212> PRT
 <213> Homo Sapiens

<400> 278

Met Val Gly Ala Asn His Ser Val Val Ser Glu Phe Val Phe Leu Gly
1 5 10 15

Leu Thr Asn Ser Trp Glu Ile Arg Leu Leu Leu Leu Val Phe Ser Ser
20 25 30

Met Phe Tyr Met Ala Ser Met Met Gly Asn Ser Leu Ile Leu Leu Thr
35 40 45

Val Thr Ser Asp Pro His Leu His Ser Pro Met Tyr Phe Leu Leu Ala
50 55 60

Asn Leu Ser Phe Ile Asp Leu Gly Val Ser Ser Val Thr Ser Pro Lys
65 70 75 80

Met Ile Tyr Asp Leu Phe Arg Lys His Glu Val Ile Ser Phe Gly Gly
85 90 95

Cys Ile Ala Gln Ile Phe Phe Ile His Val Ile Gly Gly Val Glu Met
100 105 110

Val Leu Leu Ile Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys
 115 120 125

Pro Leu Gln Tyr Leu Thr Ile Met Ser Pro Arg Met Cys Met Phe Phe
 130 135 140

Leu Val Ala Ala Trp Val Thr Gly Leu Ile His Ser Val Val Gln Leu
 145 150 155 160

Val Phe Val Val Asn Leu Pro Phe Cys Gly Pro Asn Val Ser Asp Ser
 165 170 175

Phe Tyr Cys Asp Leu Pro Arg Phe Ile Lys Leu Ala Cys Thr Asp Ser
 180 185 190

Tyr Arg Leu Glu Phe Met Val Thr Ala Asn Ser Gly Phe Ile Ser Leu
 195 200 205

Gly Ser Phe Phe Ile Leu Ile Ile Ser Tyr Val Val Ile Ile Leu Thr
 210 215 220

Val Leu Lys His Ser Ser Ala Gly Leu Ser Lys Ala Leu Ser Thr Leu
 225 230 235 240

Ser Ala His Val Ser Val Val Val Leu Phe Phe Gly Pro Leu Ile Phe
 245 250 255

Val Tyr Thr Trp Pro Ser Pro Ser Thr His Leu Asp Lys Phe Leu Ala
 260 265 270

Ile Phe Asp Ala Val Leu Thr Pro Val Leu Asn Pro Ile Ile Tyr Thr
 275 280 285

Phe Arg Asn
 290

<210> 279
 <211> 951
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (948)
 <223>

<400> 279

atg cct agt cag aac tat agc atc ata tct gaa ttt aac ctc ttt ggc	48
Met Pro Ser Gln Asn Tyr Ser Ile Ile Ser Glu Phe Asn Leu Phe Gly	
1 5 10 15	
ttc tca gcc ttc ccc cag cac ctc ctg ccc atc ttg ttc ctg ctg tac	96
Phe Ser Ala Phe Pro Gln His Leu Leu Pro Ile Leu Phe Leu Leu Tyr	
20 25 30	
ctc ctg atg ttc ctg ttc aca ttg ctg ggc aac ctt ctc atc atg gcc	144
Leu Leu Met Phe Leu Phe Thr Leu Leu Gly Asn Leu Leu Ile Met Ala	
35 40 45	
aca atc tgg att gaa cac aga ctc cac aca ccc atg tac ctc ttc ttg	192
Thr Ile Trp Ile Glu His Arg Leu His Thr Pro Met Tyr Leu Phe Leu	
50 55 60	
tgc acc ctc tcc gtc tct gag att ctg ttc act gtt gcc atc acc cct	240
Cys Thr Leu Ser Val Ser Glu Ile Leu Phe Thr Val Ala Ile Thr Pro	
65 70 75 80	
cgc atg ctg gct gat ctg ctt tcc acc cat cat tcc atc acc ttt gtg	288
Arg Met Leu Ala Asp Leu Leu Ser Thr His His Ser Ile Thr Phe Val	
85 90 95	
gct tgt gcc aac cag atg ttc ttc tcc ttc atg ttt ggc ttc act cac	336
Ala Cys Ala Asn Gln Met Phe Phe Ser Phe Met Phe Gly Phe Thr His	
100 105 110	
tcc ttc ctt ctc ctg gtc atg ggc tat gat cgc tat gtg gcc atc tgc	384
Ser Phe Leu Leu Leu Val Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys	
115 120 125	
cac cca ctg cgt tac aat gtg ctc atg agc ccc cgt gac tgt gcc cat	432
His Pro Leu Arg Tyr Asn Val Leu Met Ser Pro Arg Asp Cys Ala His	
130 135 140	
ctt gtg gcc tgt acc tgg gct ggt ggc tca gtc atg ggg atg atg gtg	480
Leu Val Ala Cys Thr Trp Ala Gly Gly Ser Val Met Gly Met Met Val	
145 150 155 160	
aca acg ata gtt ttc cac ctc act ttc tgt ggg tct aat gtg atc cac	528
Thr Thr Ile Val Phe His Leu Thr Phe Cys Gly Ser Asn Val Ile His	
165 170 175	
cat ttt ttc tgt cat gtg ctt tcc ctc ttg aag ttg gcc tgt gaa aac	576
His Phe Phe Cys His Val Leu Ser Leu Leu Lys Leu Ala Cys Glu Asn	
180 185 190	
aag aca tca tct gtc atc atg ggt gtg atg ctg gtg tgt gtc aca gcc	624
Lys Thr Ser Ser Val Ile Met Gly Val Met Leu Val Cys Val Thr Ala	
195 200 205	
ctg ata ggc tgt tta ttc ctc atc atc ctc tcc tat gtc ttc att gtg	672
Leu Ile Gly Cys Leu Phe Leu Ile Ile Leu Ser Tyr Val Phe Ile Val	
210 215 220	
gct gcc atc ttg agg att ccc tct gcc gaa ggc cgg cac aag aca ttt	720
Ala Ala Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg His Lys Thr Phe	
225 230 235 240	
tct acg tgt gta tcc cac ctc act gtg gtg gtc acg cac tat agt ttt	768

Ser Thr Cys Val Ser His Leu Thr Val Val Val Thr His Tyr Ser Phe
 245 250 255

gcc tcc ttt atc tac ctc aag ccc aag ggc ctc cat tct atg tac agt 816
 Ala Ser Phe Ile Tyr Leu Lys Pro Lys Gly Leu His Ser Met Tyr Ser
 260 265 270

gac gcc ttg atg gcc acc acc tat act gtc ttc acc ccc ttc ctt agc 864
 Asp Ala Leu Met Ala Thr Thr Tyr Thr Val Phe Thr Pro Phe Leu Ser
 275 280 285

cca atc att ttc agc cta agg aac aag gag ctg aag aat gcc ata aat 912
 Pro Ile Ile Phe Ser Leu Arg Asn Lys Glu Leu Lys Asn Ala Ile Asn
 290 295 300

aaa aac ttt tac aga aaa ttc tgt cct cca agt tcc tga 951
 Lys Asn Phe Tyr Arg Lys Phe Cys Pro Pro Ser Ser
 305 310 315

<210> 280
 <211> 316
 <212> PRT
 <213> Homo Sapiens

<400> 280

Met Pro Ser Gln Asn Tyr Ser Ile Ile Ser Glu Phe Asn Leu Phe Gly
 1 5 10 15

Phe Ser Ala Phe Pro Gln His Leu Leu Pro Ile Leu Phe Leu Leu Tyr
 20 25 30

Leu Leu Met Phe Leu Phe Thr Leu Leu Gly Asn Leu Leu Ile Met Ala
 35 40 45

Thr Ile Trp Ile Glu His Arg Leu His Thr Pro Met Tyr Leu Phe Leu
 50 55 60

Cys Thr Leu Ser Val Ser Glu Ile Leu Phe Thr Val Ala Ile Thr Pro
 65 70 75 80

Arg Met Leu Ala Asp Leu Leu Ser Thr His His Ser Ile Thr Phe Val
 85 90 95

Ala Cys Ala Asn Gln Met Phe Phe Ser Phe Met Phe Gly Phe Thr His
 100 105 110

Ser Phe Leu Leu Leu Val Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys
 115 120 125

His Pro Leu Arg Tyr Asn Val Leu Met Ser Pro Arg Asp Cys Ala His
 130 135 140

Leu Val Ala Cys Thr Trp Ala Gly Gly Ser Val Met Gly Met Met Val
 145 150 155 160

Thr Thr Ile Val Phe His Leu Thr Phe Cys Gly Ser Asn Val Ile His
 165 170 175

His Phe Phe Cys His Val Leu Ser Leu Leu Lys Leu Ala Cys Glu Asn
 180 185 190

Lys Thr Ser Ser Val Ile Met Gly Val Met Leu Val Cys Val Thr Ala
 195 200 205

Leu Ile Gly Cys Leu Phe Leu Ile Ile Leu Ser Tyr Val Phe Ile Val
 210 215 220

Ala Ala Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg His Lys Thr Phe
 225 230 235 240

Ser Thr Cys Val Ser His Leu Thr Val Val Val Thr His Tyr Ser Phe
 245 250 255

Ala Ser Phe Ile Tyr Leu Lys Pro Lys Gly Leu His Ser Met Tyr Ser
 260 265 270

Asp Ala Leu Met Ala Thr Thr Tyr Thr Val Phe Thr Pro Phe Leu Ser
 275 280 285

Pro Ile Ile Phe Ser Leu Arg Asn Lys Glu Leu Lys Asn Ala Ile Asn
 290 295 300

Lys Asn Phe Tyr Arg Lys Phe Cys Pro Pro Ser Ser
 305 310 315

<210> 281
 <211> 975
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(972)
 <223>

<400> 281
 atg ttg gag agt aat tac acc atg cca act gag ttc cta ttt gtt gga
 Met Leu Glu Ser Asn Tyr Thr Met Pro Thr Glu Phe Leu Phe Val Gly
 1 5 10 15

ttc aca gat tat cta cct ctc aga gtc aca ctg ttc ttg gta ttc ctt Phe Thr Asp Tyr Leu Pro Leu Arg Val Thr Leu Phe Leu Val Phe Leu 20 25 30	96
ctg gta tat aca tta act atg gtc gga aat ata ctc tta ata att cta Leu Val Tyr Thr Leu Thr Met Val Gly Asn Ile Leu Leu Ile Ile Leu 35 40 45	144
gtt aat att aat tca agc ctt caa att ccc atg tat tat ttt ctt agc Val Asn Ile Asn Ser Ser Leu Gln Ile Pro Met Tyr Tyr Phe Leu Ser 50 55 60	192
aac tta tct ttc tta gac atc agc tgt tct aca gca atc act cct aaa Asn Leu Ser Phe Leu Asp Ile Ser Cys Ser Thr Ala Ile Thr Pro Lys 65 70 75 80	240
atg ctg gca aac ttc ttg gca tcc agg aaa agc atc tct cct tat ggg Met Leu Ala Asn Phe Leu Ala Ser Arg Lys Ser Ile Ser Pro Tyr Gly 85 90 95	288
tgt gca cta caa atg ttt ttc ttc gct tct ttt gct gat gct gag tgc Cys Ala Leu Gln Met Phe Phe Phe Ala Ser Phe Ala Asp Ala Glu Cys 100 105 110	336
ctt atc ctg gca gca atg gct tat gac cgc tat gca gcc atc tgc aac Leu Ile Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Asn 115 120 125	384
cca ctg ctc tat act aca ctg atg tct agg aga gtc tgt gtc tgc ttc Pro Leu Leu Tyr Thr Thr Leu Met Ser Arg Arg Val Cys Val Cys Phe 130 135 140	432
att gtg ttg gca tat ttc agt gga agt aca aca tca ctg gtc cat gtg Ile Val Leu Ala Tyr Phe Ser Gly Ser Thr Thr Ser Leu Val His Val 145 150 155 160	480
tgc ctc aca ttc agg ctg tca ttt tgt ggc tcc aat atc gtc aat cat Cys Leu Thr Phe Arg Leu Ser Phe Cys Gly Ser Asn Ile Val Asn His 165 170 175	528
ttt ttc tgt gat atc cca cct ctt ctg gct tta tca tgt aca gac act Phe Phe Cys Asp Ile Pro Pro Leu Leu Ala Leu Ser Cys Thr Asp Thr 180 185 190	576
cag atc aac cag ctt ctg ctc ttt gct ttg tgc agc ttc atc cag acc Gln Ile Asn Gln Leu Leu Leu Phe Ala Leu Cys Ser Phe Ile Gln Thr 195 200 205	624
agc act ttt gtg gta ata ttt att tct tac ttc tgc atc ctc atc act Ser Thr Phe Val Val Ile Phe Ile Ser Tyr Phe Cys Ile Leu Ile Thr 210 215 220	672
gtg ttg agc atc aag tcc tca ggt ggc aga agc aaa aca ttc tcc act Val Leu Ser Ile Lys Ser Ser Gly Gly Arg Ser Lys Thr Phe Ser Thr 225 230 235 240	720
tgt gct tcc cac ctc ata gca gtc acc tta ttc tat gga gcg ctc ctg Cys Ala Ser His Leu Ile Ala Val Thr Leu Phe Tyr Gly Ala Leu Leu 245 250 255	768

ttt atg tac tta cag ccc acc act agc tat tcc cta gac act gat aag 816
 Phe Met Tyr Leu Gln Pro Thr Thr Ser Tyr Ser Leu Asp Thr Asp Lys
 260 265 270
 gtg gtg gca gtg ttt tat act gtt gta ttt ccc atg ttt aat cca ata 864
 Val Val Ala Val Phe Tyr Thr Val Val Phe Pro Met Phe Asn Pro Ile
 275 280 285
 att tat agt ttc aga aac aag gat gtg aaa aat gct ctc aaa aag cta 912
 Ile Tyr Ser Phe Arg Asn Lys Asp Val Lys Asn Ala Leu Lys Lys Leu
 290 295 300
 tta gaa aga att gga tat tca aat gaa tgg tat tta aat cgt tta aga 960
 Leu Glu Arg Ile Gly Tyr Ser Asn Glu Trp Tyr Leu Asn Arg Leu Arg
 305 310 315 320
 ata gtc aat atc taa 975
 Ile Val Asn Ile

<210> 282
 <211> 324
 <212> PRT
 <213> Homo Sapiens

<400> 282

Met Leu Glu Ser Asn Tyr Thr Met Pro Thr Glu Phe Leu Phe Val Gly
1 5 10 15

Phe Thr Asp Tyr Leu Pro Leu Arg Val Thr Leu Phe Leu Val Phe Leu
20 25 30

Leu Val Tyr Thr Leu Thr Met Val Gly Asn Ile Leu Leu Ile Ile Leu
35 40 45

Val Asn Ile Asn Ser Ser Leu Gln Ile Pro Met Tyr Tyr Phe Leu Ser
50 55 60

Asn Leu Ser Phe Leu Asp Ile Ser Cys Ser Thr Ala Ile Thr Pro Lys
65 70 75 80

Met Leu Ala Asn Phe Leu Ala Ser Arg Lys Ser Ile Ser Pro Tyr Gly
85 90 95

Cys Ala Leu Gln Met Phe Phe Phe Ala Ser Phe Ala Asp Ala Glu Cys
100 105 110

Leu Ile Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Thr Thr Leu Met Ser Arg Arg Val Cys Val Cys Phe

130	135	140
Ile Val Leu Ala Tyr Phe Ser Gly Ser Thr Thr Ser Leu Val His Val		
145	150	155 160
Cys Leu Thr Phe Arg Leu Ser Phe Cys Gly Ser Asn Ile Val Asn His		
	165	170 175
Phe Phe Cys Asp Ile Pro Pro Leu Leu Ala Leu Ser Cys Thr Asp Thr		
	180	185 190
Gln Ile Asn Gln Leu Leu Leu Phe Ala Leu Cys Ser Phe Ile Gln Thr		
	195	200 205
Ser Thr Phe Val Val Ile Phe Ile Ser Tyr Phe Cys Ile Leu Ile Thr		
	210	215 220
Val Leu Ser Ile Lys Ser Ser Gly Gly Arg Ser Lys Thr Phe Ser Thr		
	225	230 235 240
Cys Ala Ser His Leu Ile Ala Val Thr Leu Phe Tyr Gly Ala Leu Leu		
	245	250 255
Phe Met Tyr Leu Gln Pro Thr Thr Ser Tyr Ser Leu Asp Thr Asp Lys		
	260	265 270
Val Val Ala Val Phe Tyr Thr Val Val Phe Pro Met Phe Asn Pro Ile		
	275	280 285
Ile Tyr Ser Phe Arg Asn Lys Asp Val Lys Asn Ala Leu Lys Lys Leu		
	290	295 300
Leu Glu Arg Ile Gly Tyr Ser Asn Glu Trp Tyr Leu Asn Arg Leu Arg		
	305	310 315 320
Ile Val Asn Ile		

<210> 283
 <211> 945
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (942)
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<400> 283																
atg	acc	aga	aaa	aat	tat	acc	tca	ctg	act	gag	ttc	gtc	cta	ttg	gga	48
Met	Thr	Arg	Lys	Asn	Tyr	Thr	Ser	Leu	Thr	Glu	Phe	Val	Leu	Leu	Gly	
1				5				10				15				
tta	gca	gac	acg	ctg	gag	cta	cag	att	atc	ctc	ttt	ttg	ttt	ttt	ctt	96
Leu	Ala	Asp	Thr	Leu	Glu	Leu	Gln	Ile	Ile	Leu	Phe	Leu	Phe	Phe	Leu	
			20			25			30							
gtg	att	tat	aca	ctt	aca	gta	ctg	gga	aat	ctc	ggg	atg	atc	ctc	tta	144
Val	Ile	Tyr	Thr	Leu	Thr	Val	Leu	Gly	Asn	Leu	Gly	Met	Ile	Leu	Leu	
		35				40				45						
atc	agg	atc	gat	tcc	cag	ctt	cac	aca	ccc	atg	tat	ttc	ttc	ctg	gct	192
Ile	Arg	Ile	Asp	Ser	Gln	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ala	
		50				55				60						
aac	ctg	tcc	ttt	gtg	gac	gtt	tgt	aac	tca	act	acc	atc	acc	cca	aag	240
Asn	Leu	Ser	Phe	Val	Asp	Val	Cys	Asn	Ser	Thr	Thr	Ile	Thr	Pro	Lys	
65				70				75				80				
atg	ctg	gca	gat	tta	tta	tca	gag	aag	aaa	acc	atc	tct	ttt	gct	ggc	288
Met	Leu	Ala	Asp	Leu	Leu	Ser	Glu	Lys	Lys	Thr	Ile	Ser	Phe	Ala	Gly	
				85				90				95				
tgc	ttc	cta	cag	atg	tac	ttc	ttt	atc	tcc	ctg	gcg	aca	acc	gaa	tgc	336
Cys	Phe	Leu	Gln	Met	Tyr	Phe	Phe	Ile	Ser	Leu	Ala	Thr	Thr	Glu	Cys	
			100			105			110							
atc	ctc	ttt	ggg	tta	atg	gcc	tat	gac	agg	tat	gcg	gcc	ata	tgt	cgc	384
Ile	Leu	Phe	Gly	Leu	Met	Ala	Tyr	Asp	Arg	Tyr	Ala	Ala	Ile	Cys	Arg	
		115				120				125						
ccg	ctg	ctt	tac	tcc	ttg	atc	atg	tcc	agg	acc	gtc	tac	cta	aaa	atg	432
Pro	Leu	Leu	Tyr	Ser	Leu	Ile	Met	Ser	Arg	Thr	Val	Tyr	Leu	Lys	Met	
130						135			140							
gca	gcc	ggg	gct	ttt	gct	gca	ggg	ttg	ctg	aac	ttc	atg	gtc	aac	aca	480
Ala	Ala	Gly	Ala	Phe	Ala	Ala	Gly	Leu	Leu	Asn	Phe	Met	Val	Asn	Thr	
145				150				155		160						
agc	cat	gtc	agc	agc	ttg	tca	ttc	tgt	gac	tcc	aat	gtc	atc	cat	cac	528
Ser	His	Val	Ser	Ser	Leu	Ser	Phe	Cys	Asp	Ser	Asn	Val	Ile	His	His	
				165				170				175				
ttc	ttc	tgt	gac	agt	ccc	cca	ctt	ttc	aag	ctc	tct	tgt	tct	gac	aca	576
Phe	Phe	Cys	Asp	Ser	Pro	Pro	Leu	Phe	Lys	Leu	Ser	Cys	Ser	Asp	Thr	
			180			185			190							
atc	ctg	aaa	gaa	agc	ata	agt	tct	att	ttg	gct	ggt	gtg	aat	att	gtg	624
Ile	Leu	Lys	Glu	Ser	Ile	Ser	Ser	Ile	Leu	Ala	Gly	Val	Asn	Ile	Val	
		195				200				205						
ggg	act	ctg	ctt	gtc	atc	ctc	tcc	tcc	tac	tcc	tac	gtt	ctc	ttc	tcc	672
Gly	Thr	Leu														

tgt gcc tct cac ctg aca gcc ata att ctg ttc tat gcc acc tgc atc 768
 Cys Ala Ser His Leu Thr Ala Ile Ile Leu Phe Tyr Ala Thr Cys Ile
 245 250 255

 tat act tac ctg aga cct agt tcc agc tac tcc ctg aat cag gac aaa 816
 Tyr Thr Tyr Leu Arg Pro Ser Ser Ser Tyr Ser Leu Asn Gln Asp Lys
 260 265 270

 gtg gct tct gtg ttc tac aca gtg gtg att ccc atg ttg aat cct ctg 864
 Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

 atc tac agc ctc agg agt aag gaa gta aag aag gct tta gcg aat gta 912
 Ile Tyr Ser Leu Arg Ser Lys Glu Val Lys Lys Ala Leu Ala Asn Val
 290 295 300

 att agc agg aaa agg acc tct tcc ttt ctg tga 945
 Ile Ser Arg Lys Arg Thr Ser Ser Phe Leu
 305 310

<210> 284
 <211> 314
 <212> PRT
 <213> Homo Sapiens

<400> 284

Met Thr Arg Lys Asn Tyr Thr Ser Leu Thr Glu Phe Val Leu Leu Gly
 1 5 10 15

Leu Ala Asp Thr Leu Glu Leu Gln Ile Ile Leu Phe Leu Phe Phe Leu
 20 25 30

Val Ile Tyr Thr Leu Thr Val Leu Gly Asn Leu Gly Met Ile Leu Leu
 35 40 45

Ile Arg Ile Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ala
 50 55 60

Asn Leu Ser Phe Val Asp Val Cys Asn Ser Thr Thr Ile Thr Pro Lys
 65 70 75 80

Met Leu Ala Asp Leu Leu Ser Glu Lys Lys Thr Ile Ser Phe Ala Gly
 85 90 95

Cys Phe Leu Gln Met Tyr Phe Phe Ile Ser Leu Ala Thr Thr Glu Cys
 100 105 110

Ile Leu Phe Gly Leu Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Arg
 115 120 125

Pro Leu Leu Tyr Ser Leu Ile Met Ser Arg Thr Val Tyr Leu Lys Met
 130 135 140

Ala Ala Gly Ala Phe Ala Ala Gly Leu Leu Asn Phe Met Val Asn Thr
 145 150 155 160

Ser His Val Ser Ser Leu Ser Phe Cys Asp Ser Asn Val Ile His His
 165 170 175

Phe Phe Cys Asp Ser Pro Pro Leu Phe Lys Leu Ser Cys Ser Asp Thr
 180 185 190

Ile Leu Lys Glu Ser Ile Ser Ser Ile Leu Ala Gly Val Asn Ile Val
 195 200 205

Gly Thr Leu Leu Val Ile Leu Ser Ser Tyr Ser Tyr Val Leu Phe Ser
 210 215 220

Ile Phe Ser Met His Ser Gly Glu Gly Arg His Arg Ala Phe Ser Thr
 225 230 235 240

Cys Ala Ser His Leu Thr Ala Ile Ile Leu Phe Tyr Ala Thr Cys Ile
 245 250 255

Tyr Thr Tyr Leu Arg Pro Ser Ser Ser Tyr Ser Leu Asn Gln Asp Lys
 260 265 270

Val Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Ser Lys Glu Val Lys Lys Ala Leu Ala Asn Val
 290 295 300

Ile Ser Arg Lys Arg Thr Ser Ser Phe Leu
 305 310

<210> 285
 <211> 948
 <212> DNA
 <213> Homo Sapiens

<220>
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 <222> (1) .. (945)
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<400> 285
 atg gct cct gaa aat ttc acc agg gtc act gag ttt att ctc aca ggt

Met	Ala	Pro	Glu	Asn	Phe	Thr	Arg	Val	Thr	Glu	Phe	Ile	Leu	Thr	Gly		
1				5					10					15			
gtc	tct	agc	tgt	cca	gag	ctc	cag	att	ccc	ctc	ttc	ctg	gtc	ttc	cta		96
Val	Ser	Ser	Cys	Pro	Glu	Leu	Gln	Ile	Pro	Leu	Phe	Leu	Val	Phe	Leu		
			20					25					30				
gtg	ctc	tat	gtg	ctg	acc	atg	gca	ggg	aac	ctg	ggc	atc	atc	acc	ctc		144
Val	Leu	Tyr	Val	Leu	Thr	Met	Ala	Gly	Asn	Leu	Gly	Ile	Ile	Thr	Leu		
		35					40					45					
acc	agt	gtt	gac	tct	cga	ctt	caa	acc	ccc	atg	tac	ttt	ttc	ctg	aga		192
Thr	Ser	Val	Asp	Ser	Arg	Leu	Gln	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Arg		
	50					55					60						
cat	cta	gct	atc	atc	aat	ctt	ggc	aac	tct	act	gtc	att	gcc	cct	aaa		240
His	Leu	Ala	Ile	Ile	Asn	Leu	Gly	Asn	Ser	Thr	Val	Ile	Ala	Pro	Lys		
65					70				75						80		
atg	ctg	atg	aac	ttt	tta	gta	aag	aag	aaa	act	acc	tca	ttc	tat	gaa		288
Met	Leu	Met	Asn	Phe	Leu	Val	Lys	Lys	Lys	Thr	Thr	Ser	Phe	Tyr	Glu		
			85					90						95			
tgt	gcc	acc	caa	ctg	gga	ggg	ttc	ttg	ttc	ttt	att	gta	tcg	gag	gta		336
Cys	Ala	Thr	Gln	Leu	Gly	Gly	Phe	Leu	Phe	Phe	Ile	Val	Ser	Glu	Val		
			100					105					110				
atg	atg	ctg	gct	gtg	atg	gcc	tat	gac	cgc	tat	gtg	gcc	att	tgt	aac		384
Met	Met	Leu	Ala	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn		
		115					120					125					
cct	ctg	ctc	tac	atg	gtg	gtg	gtg	tct	cgg	cgg	ctc	tgc	ctc	ctg	ctg		432
Pro	Leu	Leu	Tyr	Met	Val	Val	Val	Ser	Arg	Arg	Leu	Cys	Leu	Leu	Leu		
		130				135					140						
gtg	tcc	ctc	acg	tac	ctc	tat	ggc	ttt	tct	aca	gct	att	gtg	gtt	tca		480
Val	Ser	Leu	Thr	Tyr	Leu	Tyr	Gly	Phe	Ser	Thr	Ala	Ile	Val	Val	Ser		
145					150				155					160			
cct	tgt	ata	ttc	tct	gtg	tct	tat	tgc	tct	tct	aat	ata	atc	aat	cat		528
Pro	Cys	Ile	Phe	Ser	Val	Ser	Tyr	Cys	Ser	Ser	Asn	Ile	Ile	Asn	His		
			165					170						175			
ttt	tac	tgt	gat	att	gca	cct	ctg	tta	gca	tta	tct	tgc	tct	gat	act		576
Phe	Tyr	Cys	Asp	Ile	Ala	Pro	Leu	Leu	Ala	Leu	Ser	Cys	Ser	Asp	Thr		
			180				185					190					
tac	ata	cca	gaa	aca	ata	gtc	ttt	ata	tct	gca	gca	aca	aat	ttg	ttt		624
Tyr	Ile	Pro	Glu	Thr	Ile	Val	Phe	Ile	Ser	Ala	Ala	Thr	Asn	Leu	Phe		
		195					200					205					
ttt	tcc	atg	att	aca	gtt	cta	gta	tct	tat	ttc	aat	att	gtt	ttg	tcc		672
Phe	Ser	Met	Ile	Thr	Val	Leu	Val	Ser	Tyr	Phe	Asn	Ile	Val	Leu	Ser		
		210				215				220							
att	cta	agg	ata	cgt	tca	cca	gaa	gga	agg	aaa	aaa	gcc	ttt	tcc	acc		720
Ile	Leu	Arg	Ile	Arg	Ser	Pro	Glu	Gly	Arg	Lys	Lys	Ala	Phe	Ser	Thr		
225					230				235					240			
tgc	gct	tcg	cat	atg	ata	gca	gtc	acg	gtt	ttc	tat	ggg	aca	atg	cta		768
Cys	Ala	Ser	His	Met	Ile	Ala	Val	Thr	Val	Phe	Tyr	Gly	Thr	Met	Leu		

	245	250	255	
ttt atg tat ttg cag ccc caa acc aac cac tca ctg gat act gat aag				816
Phe Met Tyr Leu Gln Pro Gln Thr Asn His Ser Leu Asp Thr Asp Lys				
	260	265	270	
atg gct tct gtg ttt tac aca ttg gtg att cct atg ctg aat ccc ttg				864
Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro Leu				
	275	280	285	
atc tac agc ctg agg aat aat gat gta aat gtt gcc tta aag aaa ttc				912
Ile Tyr Ser Leu Arg Asn Asn Asp Val Asn Val Ala Leu Lys Lys Phe				
	290	295	300	
atg gaa aat cca tgt tac tcc ttt aaa tca atg taa				948
Met Glu Asn Pro Cys Tyr Ser Phe Lys Ser Met				
	305	310	315	
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<211> 315				
<212> PRT				
<213> Homo Sapiens				
 <400> 286				
Met Ala Pro Glu Asn Phe Thr Arg Val Thr Glu Phe Ile Leu Thr Gly				
1	5	10	15	
Val Ser Ser Cys Pro Glu Leu Gln Ile Pro Leu Phe Leu Val Phe Leu				
	20	25	30	
Val Leu Tyr Val Leu Thr Met Ala Gly Asn Leu Gly Ile Ile Thr Leu				
	35	40	45	
Thr Ser Val Asp Ser Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Arg				
	50	55	60	
His Leu Ala Ile Ile Asn Leu Gly Asn Ser Thr Val Ile Ala Pro Lys				
65	70	75	80	
Met Leu Met Asn Phe Leu Val Lys Lys Lys Thr Thr Ser Phe Tyr Glu				
	85	90	95	
Cys Ala Thr Gln Leu Gly Gly Phe Leu Phe Phe Ile Val Ser Glu Val				
	100	105	110	
Met Met Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn				
	115	120	125	
Pro Leu Leu Tyr Met Val Val Val Ser Arg Arg Leu Cys Leu Leu Leu				
	130	135	140	

Val Ser Leu Thr Tyr Leu Tyr Gly Phe Ser Thr Ala Ile Val Val Ser
145 150 155 160

Pro Cys Ile Phe Ser Val Ser Tyr Cys Ser Ser Asn Ile Ile Asn His
165 170 175

Phe Tyr Cys Asp Ile Ala Pro Leu Leu Ala Leu Ser Cys Ser Asp Thr
180 185 190

Tyr Ile Pro Glu Thr Ile Val Phe Ile Ser Ala Ala Thr Asn Leu Phe
195 200 205

Phe Ser Met Ile Thr Val Leu Val Ser Tyr Phe Asn Ile Val Leu Ser
210 215 220

Ile Leu Arg Ile Arg Ser Pro Glu Gly Arg Lys Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Met Ile Ala Val Thr Val Phe Tyr Gly Thr Met Leu
245 250 255

Phe Met Tyr Leu Gln Pro Gln Thr Asn His Ser Leu Asp Thr Asp Lys
260 265 270

Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Asn Asp Val Asn Val Ala Leu Lys Lys Phe
290 295 300

Met Glu Asn Pro Cys Tyr Ser Phe Lys Ser Met
305 310 315

<210> 287
<211> 933
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1) .. (930)
<223>

<400> 287
atg gct ggc aac aat ttc act gag gtt acc gtc ttc atc ctc tct gga
Met Ala Gly Asn Asn Phe Thr Glu Val Thr Val Phe Ile Leu Ser Gly
1 5 10 15

ttt gca aat cac cct gaa tta caa gtc agt ctt ttc ttg atg ttt ctc	96
Phe Ala Asn His Pro Glu Leu Gln Val Ser Leu Phe Leu Met Phe Leu	
20 25 30	
ttc att tat cta ttc act gtt ttg gga aac ctg gga ctg atc acg tta	144
Phe Ile Tyr Leu Phe Thr Val Leu Gly Asn Leu Gly Leu Ile Thr Leu	
35 40 45	
atc aga atg gat tct cag ctt cac acc cct atg tac ttt ttc ctg agc	192
Ile Arg Met Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser	
50 55 60	
aat tta gca ttt att gac ata ttt tac tcc tct act gta aca cct aag	240
Asn Leu Ala Phe Ile Asp Ile Phe Tyr Ser Ser Thr Val Thr Pro Lys	
65 70 75 80	
gca ttg gtg aat ttc caa tcc aat cgg aga tcc atc tcc ttt gtt ggc	288
Ala Leu Val Asn Phe Gln Ser Asn Arg Arg Ser Ile Ser Phe Val Gly	
85 90 95	
tgc ttt gtt caa atg tac ttt ttt gtt gga ttg gtg tgt tgt gag tgt	336
Cys Phe Val Gln Met Tyr Phe Phe Val Gly Leu Val Cys Cys Glu Cys	
100 105 110	
ttc ctt ctg gga tca atg gcc tac aat cgc tac ata gca atc tgc aat	384
Phe Leu Leu Gly Ser Met Ala Tyr Asn Arg Tyr Ile Ala Ile Cys Asn	
115 120 125	
ccc tta ctg tat tca gta gtc atg tcc caa aaa gtg tcc aac tgg ctg	432
Pro Leu Leu Tyr Ser Val Val Met Ser Gln Lys Val Ser Asn Trp Leu	
130 135 140	
gga gta atg cca tat gtg ata ggc ttc aca agc tcg ctg ata tct gtc	480
Gly Val Met Pro Tyr Val Ile Gly Phe Thr Ser Ser Leu Ile Ser Val	
145 150 155 160	
tgg gtg ata agc agt ttg gcg ttc tgt gat tcc agc atc aat cat ttt	528
Trp Val Ile Ser Ser Leu Ala Phe Cys Asp Ser Ser Ile Asn His Phe	
165 170 175	
ttt tgt gac acc aca gct ctt tta gca ctc tcc tgt gta gat aca ttc	576
Phe Cys Asp Thr Ala Leu Leu Ala Leu Ser Cys Val Asp Thr Phe	
180 185 190	
ggc aca gaa atg gtg agc ttt gtc tta gct gga ttc act ctt ctt agc	624
Gly Thr Glu Met Val Ser Phe Val Leu Ala Gly Phe Thr Leu Leu Ser	
195 200 205	
tct ctc ctt atc atc aca gtc act tat atc atc atc atc tca gcc atc	672
Ser Leu Leu Ile Ile Thr Val Thr Tyr Ile Ile Ile Ile Ser Ala Ile	
210 215 220	
ctg agg atc cag tca gca gca ggc agg cag aag gcc ttc tcc acc tgc	720
Leu Arg Ile Gln Ser Ala Ala Gly Arg Gln Lys Ala Phe Ser Thr Cys	
225 230 235 240	
gca tcc cac ctc atg gct gta act atc ttt tat ggg tct ctg att ttc	768
Ala Ser His Leu Met Ala Val Thr Ile Phe Tyr Gly Ser Leu Ile Phe	
245 250 255	
acc tat ttg caa cct gat aac aca tca tcg ctg acc cag gcg cag gtg	816

Thr Tyr Leu Gln Pro Asp Asn Thr Ser Ser Leu Thr Gln Ala Gln Val
 260 265 270

gca tct gta ttc tat acg att gtc att ccc atg ctg aat cca ctc atc 864
 Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285

tac agt ctg agg aac aaa gat gtg aaa aat gct ctt ctg aga gtc ata 912
 Tyr Ser Leu Arg Asn Lys Asp Val Lys Asn Ala Leu Leu Arg Val Ile
 290 295 300

cat aga aaa ctt ttt cca tga 933
 His Arg Lys Leu Phe Pro
 305 310

<210> 288
 <211> 310
 <212> PRT
 <213> Homo Sapiens
 <400> 288

Met Ala Gly Asn Asn Phe Thr Glu Val Thr Val Phe Ile Leu Ser Gly
 1 5 10 15

Phe Ala Asn His Pro Glu Leu Gln Val Ser Leu Phe Leu Met Phe Leu
 20 25 30

Phe Ile Tyr Leu Phe Thr Val Leu Gly Asn Leu Gly Leu Ile Thr Leu
 35 40 45

Ile Arg Met Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Asn Leu Ala Phe Ile Asp Ile Phe Tyr Ser Ser Thr Val Thr Pro Lys
 65 70 75 80

Ala Leu Val Asn Phe Gln Ser Asn Arg Arg Ser Ile Ser Phe Val Gly
 85 90 95

Cys Phe Val Gln Met Tyr Phe Phe Val Gly Leu Val Cys Cys Glu Cys
 100 105 110

Phe Leu Leu Gly Ser Met Ala Tyr Asn Arg Tyr Ile Ala Ile Cys Asn
 115 120 125

Pro Leu Leu Tyr Ser Val Val Met Ser Gln Lys Val Ser Asn Trp Leu
 130 135 140

Gly Val Met Pro Tyr Val Ile Gly Phe Thr Ser Ser Leu Ile Ser Val
 145 150 155 160

Trp Val Ile Ser Ser Leu Ala Phe Cys Asp Ser Ser Ile Asn His Phe
 165 170 175

Phe Cys Asp Thr Thr Ala Leu Leu Ala Leu Ser Cys Val Asp Thr Phe
 180 185 190

Gly Thr Glu Met Val Ser Phe Val Leu Ala Gly Phe Thr Leu Leu Ser
 195 200 205

Ser Leu Leu Ile Ile Thr Val Thr Tyr Ile Ile Ile Ile Ser Ala Ile
 210 215 220

Leu Arg Ile Gln Ser Ala Ala Gly Arg Gln Lys Ala Phe Ser Thr Cys
 225 230 235 240

Ala Ser His Leu Met Ala Val Thr Ile Phe Tyr Gly Ser Leu Ile Phe
 245 250 255

Thr Tyr Leu Gln Pro Asp Asn Thr Ser Ser Leu Thr Gln Ala Gln Val
 260 265 270

Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Asp Val Lys Asn Ala Leu Leu Arg Val Ile
 290 295 300

His Arg Lys Leu Phe Pro
 305 310

<210> 289
 <211> 939
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(936)
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<400> 289
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 Met Met Gly Arg Arg Asn Asn Thr Asn Val Ala Asp Phe Ile Leu Met
 1 5 10 15

gga ctg aca ctt tct gaa gag atc cag atg gct ctg ttt atg cta ttt 96
 Gly Leu Thr Leu Ser Glu Glu Ile Gln Met Ala Leu Phe Met Leu Phe
 20 25 30

ctc ctg ata tac cta att act atg ctg ggg aat gtg ggg atg ata ttg Leu Leu Ile Tyr Leu Ile Thr Met Leu Gly Asn Val Gly Met Ile Leu 35 40 45	144
ata atc cgc ctg gac ctc cag ctt cac act ccc atg tat ttt ttc ctt Ile Ile Arg Leu Asp Leu Gln Leu His Thr Pro Met Tyr Phe Phe Leu 50 55 60	192
act cac ctg tca ttt att gac ctc agt tac tca act gtc gtc aca cct Thr His Leu Ser Phe Ile Asp Leu Ser Tyr Ser Thr Val Val Thr Pro 65 70 75 80	240
aaa acc tta gcg aac tta ctg act tcc aac tat att tcc ttt acg ggc Lys Thr Leu Ala Asn Leu Leu Thr Ser Asn Tyr Ile Ser Phe Thr Gly 85 90 95	288
tgc ttt gcc cag atg ttc ttt ttt gcc ttc ttg ggt act gct gaa tgt Cys Phe Ala Gln Met Phe Phe Phe Ala Phe Leu Gly Thr Ala Glu Cys 100 105 110	336
tac ctt ctc tcc tca atg gcc cat gat cgc tat gca gcg atc tgc agt Tyr Leu Leu Ser Ser Met Ala His Asp Arg Tyr Ala Ala Ile Cys Ser 115 120 125	384
cct cta cac tac aca gtt att atg tcc aaa agg ctc tgc ctc gct ctc Pro Leu His Tyr Thr Val Ile Met Ser Lys Arg Leu Cys Leu Ala Leu 130 135 140	432
atc act ggg cct tat gtg att ggc ttt ata gac tcc ttt gtc aac gtg Ile Thr Gly Pro Tyr Val Ile Gly Phe Ile Asp Ser Phe Val Asn Val 145 150 155 160	480
gtt tcc atg agc aga ttg cat ttc tac gac tca aac gta att cat cac Val Ser Met Ser Arg Leu His Phe Tyr Asp Ser Asn Val Ile His His 165 170 175	528
ttt ttc tgt gac act tcc cca att tta gct ctg tcc tgc act gat aca Phe Phe Cys Asp Thr Ser Pro Ile Leu Ala Leu Ser Cys Thr Asp Thr 180 185 190	576
tac aac acc gaa atc ctg ata ttc att att gtt ggt tcc acc ctg atg Tyr Asn Thr Glu Ile Leu Ile Phe Ile Ile Val Gly Ser Thr Leu Met 195 200 205	624
gtg tcc ctt ttc aca ata tct gca tcc tat gtg ttc att ctc ttt acc Val Ser Leu Phe Thr Ile Ser Ala Ser Tyr Val Phe Ile Leu Phe Thr 210 215 220	672
atc ctg aaa att aat tcc act tca gga aag cag aaa gct ttc tct act Ile Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Phe Ser Thr 225 230 235 240	720
tgc gtc tct cat ctc ttg gga gtc acc atc ttt tat agc act ctg att Cys Val Ser His Leu Leu Gly Val Thr Ile Phe Tyr Ser Thr Leu Ile 245 250 255	768
ttt act tat tta aaa cca aga aag tct tat tcc ttg gga aga gat caa Phe Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln 260 265 270	816

gtg gct tct gtt ttt tat act att gtg att ccc gtg ctg aat cca ctc 864
 Val Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Val Leu Asn Pro Leu
 275 280 285

att tat agt ctt aga aac aaa gag gtg aaa aat gct gtc atc aga gtc 912
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Ala Val Ile Arg Val
 290 295 300

atg cag aga aga cag gac tcc agg taa 939
 Met Gln Arg Arg Gln Asp Ser Arg
 305 310

<210> 290
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 290

Met Met Gly Arg Arg Asn Asn Thr Asn Val Ala Asp Phe Ile Leu Met
 1 5 10 15

Gly Leu Thr Leu Ser Glu Glu Ile Gln Met Ala Leu Phe Met Leu Phe
 20 25 30

Leu Leu Ile Tyr Leu Ile Thr Met Leu Gly Asn Val Gly Met Ile Leu
 35 40 45

Ile Ile Arg Leu Asp Leu Gln Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Thr His Leu Ser Phe Ile Asp Leu Ser Tyr Ser Thr Val Val Thr Pro
 65 70 75 80

Lys Thr Leu Ala Asn Leu Leu Thr Ser Asn Tyr Ile Ser Phe Thr Gly
 85 90 95

Cys Phe Ala Gln Met Phe Phe Phe Ala Phe Leu Gly Thr Ala Glu Cys
 100 105 110

Tyr Leu Leu Ser Ser Met Ala His Asp Arg Tyr Ala Ala Ile Cys Ser
 115 120 125

Pro Leu His Tyr Thr Val Ile Met Ser Lys Arg Leu Cys Leu Ala Leu
 130 135 140

Ile Thr Gly Pro Tyr Val Ile Gly Phe Ile Asp Ser Phe Val Asn Val
 145 150 155 160

Val Ser Met Ser Arg Leu His Phe Tyr Asp Ser Asn Val Ile His His

165 170 175
 Phe Phe Cys Asp Thr Ser Pro Ile Leu Ala Leu Ser Cys Thr Asp Thr
 180 185 190
 Tyr Asn Thr Glu Ile Leu Ile Phe Ile Ile Val Gly Ser Thr Leu Met
 195 200 205
 Val Ser Leu Phe Thr Ile Ser Ala Ser Tyr Val Phe Ile Leu Phe Thr
 210 215 220
 Ile Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Val Ser His Leu Leu Gly Val Thr Ile Phe Tyr Ser Thr Leu Ile
 245 250 255
 Phe Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln
 260 265 270
 Val Ala Ser Val Phe Tyr Thr Ile Val Ile Pro Val Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Asn Ala Val Ile Arg Val
 290 295 300
 Met Gln Arg Arg Gln Asp Ser Arg
 305 310

<210> 291
 <211> 939
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(936)
 <223>

<400> 291
 atg atg ggt aga agg aat gac aca aat gtg gct gac ttc atc ctt acg 48
 Met Met Gly Arg Arg Asn Asp Thr Asn Val Ala Asp Phe Ile Leu Thr
 1 5 10 15
 gga ctg tca gac tct gaa gag gtc cag atg gct ctg ttt atg cta ttt 96
 Gly Leu Ser Asp Ser Glu Glu Val Gln Met Ala Leu Phe Met Leu Phe
 20 25 30
 ctc ctc ata tac cta att act atg ctg ggg aat gtg ggg atg cta ttg 144
 Leu Leu Ile Tyr Leu Ile Thr Met Leu Gly Asn Val Gly Met Leu Leu

35	40	45	
ata atc cgc ctg gac ctc cag ctt cac act ccc atg tat ttt ttc ctt Ile Ile Arg Leu Asp Leu Gln Leu His Thr Pro Met Tyr Phe Phe Leu 50 55 60			192
act cac ctg tca ttt att gac ctc agt tac tca act gtc gtc aca cct Thr His Leu Ser Phe Ile Asp Leu Ser Tyr Ser Thr Val Val Thr Pro 65 70 75 80			240
aaa acc tta gcg aac tta ctg act tcc aac tat att tcc ttc acg ggc Lys Thr Leu Ala Asn Leu Leu Thr Ser Asn Tyr Ile Ser Phe Thr Gly 85 90 95			288
tgc ttt gcc cag atg ttc tgt ttt gtc ttc ttg ggt act gct gaa tgt Cys Phe Ala Gln Met Phe Cys Phe Val Phe Leu Gly Thr Ala Glu Cys 100 105 110			336
tat ctt ctc tcc tca atg gcc tat gat cgc tat gca gcg atc tgc agt Tyr Leu Leu Ser Ser Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Ser 115 120 125			384
cct cta cac tac aca gtt att atg ccc aaa agg ctc tgc ctc gct ctc Pro Leu His Tyr Thr Val Ile Met Pro Lys Arg Leu Cys Leu Ala Leu 130 135 140			432
atc act ggg cct tat gtg att ggc ttt atg gac tcc ttt gtc aat gtg Ile Thr Gly Pro Tyr Val Ile Gly Phe Met Asp Ser Phe Val Asn Val 145 150 155 160			480
gtt tcc atg agc aga ttg cat ttc tgt gac tca aac ata att cat cac Val Ser Met Ser Arg Leu His Phe Cys Asp Ser Asn Ile Ile His His 165 170 175			528
ttt ttc tgt gac act tcc cca att tta gct ctg tcc tgc act gac aca Phe Phe Cys Asp Thr Ser Pro Ile Leu Ala Leu Ser Cys Thr Asp Thr 180 185 190			576
gac aac act gaa atg ctg ata ttc att atc gct ggt tcc acc ctg atg Asp Asn Thr Glu Met Leu Ile Phe Ile Ile Ala Gly Ser Thr Leu Met 195 200 205			624
gtg tcc ctt atc aca ata tct gca tcc tat gtg tcc att ctc tct acc Val Ser Leu Ile Thr Ile Ser Ala Ser Tyr Val Ser Ile Leu Ser Thr 210 215 220			672
atc ctg aaa att aat tcc act tca gga aag cag aaa gct ttc tct act Ile Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Phe Ser Thr 225 230 235 240			720
tgc gtc tct cat ctc ttg gga gtc acc atc ttc tat gga act atg att Cys Val Ser His Leu Leu Gly Val Thr Ile Phe Tyr Gly Thr Met Ile 245 250 255			768
ttt act tac tta aag cca aga aag tct tat tcc ttg gga aga gat caa Phe Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln 260 265 270			816
gtg gct cct gtg ttt tat act att gtg att ccc atg ctg aat cca ctc Val Ala Pro Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu 275 280 285			864

att tat agt ctt aga aac aga gaa gtg aaa aat gct ctc att aga gtc 912
 Ile Tyr Ser Leu Arg Asn Arg Glu Val Lys Asn Ala Leu Ile Arg Val
 290 295 300

atg cag aga aga cag gac tcc agg tag 939
 Met Gln Arg Arg Gln Asp Ser Arg
 305 310

<210> 292
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 292

Met Met Gly Arg Arg Asn Asp Thr Asn Val Ala Asp Phe Ile Leu Thr
 1 5 10 15

Gly Leu Ser Asp Ser Glu Glu Val Gln Met Ala Leu Phe Met Leu Phe
 20 25 30

Leu Leu Ile Tyr Leu Ile Thr Met Leu Gly Asn Val Gly Met Leu Leu
 35 40 45

Ile Ile Arg Leu Asp Leu Gln Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Thr His Leu Ser Phe Ile Asp Leu Ser Tyr Ser Thr Val Val Thr Pro
 65 70 75 80

Lys Thr Leu Ala Asn Leu Leu Thr Ser Asn Tyr Ile Ser Phe Thr Gly
 85 90 95

Cys Phe Ala Gln Met Phe Cys Phe Val Phe Leu Gly Thr Ala Glu Cys
 100 105 110

Tyr Leu Leu Ser Ser Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Ser
 115 120 125

Pro Leu His Tyr Thr Val Ile Met Pro Lys Arg Leu Cys Leu Ala Leu
 130 135 140

Ile Thr Gly Pro Tyr Val Ile Gly Phe Met Asp Ser Phe Val Asn Val
 145 150 155 160

Val Ser Met Ser Arg Leu His Phe Cys Asp Ser Asn Ile Ile His His
 165 170 175

Phe Phe Cys Asp Thr Ser Pro Ile Leu Ala Leu Ser Cys Thr Asp Thr
180 185 190

Asp Asn Thr Glu Met Leu Ile Phe Ile Ile Ala Gly Ser Thr Leu Met
195 200 205

Val Ser Leu Ile Thr Ile Ser Ala Ser Tyr Val Ser Ile Leu Ser Thr
210 215 220

Ile Leu Lys Ile Asn Ser Thr Ser Gly Lys Gln Lys Ala Phe Ser Thr
225 230 235 240

Cys Val Ser His Leu Leu Gly Val Thr Ile Phe Tyr Gly Thr Met Ile
245 250 255

Phe Thr Tyr Leu Lys Pro Arg Lys Ser Tyr Ser Leu Gly Arg Asp Gln
260 265 270

Val Ala Pro Val Phe Tyr Thr Ile Val Ile Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Glu Val Lys Asn Ala Leu Ile Arg Val
290 295 300

Met Gln Arg Arg Gln Asp Ser Arg
305 310

<210> 293
<211> 924
<212> DNA
<213> Homo Sapiens

<220>
<221> CDS
<222> (1)..(921)
<223>

<400> 293
atg ggc caa cac aat cta aca gtg cta act gaa ttc att ctg atg gaa 48
Met Gly Gln His Asn Leu Thr Val Leu Thr Glu Phe Ile Leu Met Glu
1 5 10 15
ctc aca agg cgg cct gag ctg cag att ccc ctt ttt gga gtc ttc ctc 96
Leu Thr Arg Arg Pro Glu Leu Gln Ile Pro Leu Phe Gly Val Phe Leu
20 25 30
gtc atc tac cta atc aca gtg gtg ggc aac cta act atg atc att ttg 144
Val Ile Tyr Leu Ile Thr Val Val Gly Asn Leu Thr Met Ile Ile Leu
35 40 45
acc aaa ctg gac tcc cac tta cat aca cct atg tac ttt tct atc aga 192

Thr Lys Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Ser Ile Arg	
50 55 60	
cat ttg gct tct gtt gat ctt ggt aat tct act gtc att tgt ccc aag	240
His Leu Ala Ser Val Asp Leu Gly Asn Ser Thr Val Ile Cys Pro Lys	
65 70 75 80	
gtg ctg gca aat ttt gtt gtg gat cga aat act att tcc tat tat gca	288
Val Leu Ala Asn Phe Val Val Asp Arg Asn Thr Ile Ser Tyr Tyr Ala	
85 90 95	
tgt gct gca cag ctg gca ttc ttc ctt atg ttc att atc agt gaa ttt	336
Cys Ala Ala Gln Leu Ala Phe Phe Leu Met Phe Ile Ile Ser Glu Phe	
100 105 110	
ttc atc ctg tca gcc atg gcc tat gac cgc tat gtg gcc att tgt aac	384
Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn	
115 120 125	
cct ctg ctc tat tat gtt att atg tct cag cga ctg tgt cat gta ctg	432
Pro Leu Leu Tyr Tyr Val Ile Met Ser Gln Arg Leu Cys His Val Leu	
130 135 140	
gtg ggc att caa tat ctc tac agc aca ttt cag gct ctg atg ttc act	480
Val Gly Ile Gln Tyr Leu Tyr Ser Thr Phe Gln Ala Leu Met Phe Thr	
145 150 155 160	
att aag att ttt aca ttg acc ttc tgt ggc tct aat gtc atc agt cat	528
Ile Lys Ile Phe Thr Leu Thr Phe Cys Gly Ser Asn Val Ile Ser His	
165 170 175	
ttt tac tgt gat gat gtt cct ttg cta cct atg ctt tgc tca aat gca	576
Phe Tyr Cys Asp Asp Val Pro Leu Leu Pro Met Leu Cys Ser Asn Ala	
180 185 190	
cag gaa ata gaa ttg ttg agc ata cta ttt tct gta ttt aat ttg atc	624
Gln Glu Ile Glu Leu Leu Ser Ile Leu Phe Ser Val Phe Asn Leu Ile	
195 200 205	
tcc tcc ttt ctg ata gtc tta gtg tcc tac atg ttg att ttg tta gct	672
Ser Ser Phe Leu Ile Val Leu Val Ser Tyr Met Leu Ile Leu Leu Ala	
210 215 220	
ata tgt caa atg cat tct gca gag ggc agg aaa aag gct ttc tcc aca	720
Ile Cys Gln Met His Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr	
225 230 235 240	
tgt ggt tcc cat ttg aca gtg gtg gtt gtg ttc tat ggg tct cta ctc	768
Cys Gly Ser His Leu Thr Val Val Val Val Phe Tyr Gly Ser Leu Leu	
245 250 255	
ttc atg tac atg cag ccc aat tcc act cac ttc ttt gat act gat aaa	816
Phe Met Tyr Met Gln Pro Asn Ser Thr His Phe Phe Asp Thr Asp Lys	
260 265 270	
atg gct tct gtg ttt tac act tta gta atc ccc atg ctt aac cct ttg	864
Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro Leu	
275 280 285	
att tac agc tta aga aac gaa gag gtg aaa aat gcc ttc tat aag ctc	912
Ile Tyr Ser Leu Arg Asn Glu Glu Val Lys Asn Ala Phe Tyr Lys Leu	

290 295 300
 ttt gag aat tga 924
 Phe Glu Asn
 305

 <210> 294
 <211> 307
 <212> PRT
 <213> Homo Sapiens

 <400> 294

 Met Gly Gln His Asn Leu Thr Val Leu Thr Glu Phe Ile Leu Met Glu
 1 5 10 15

 Leu Thr Arg Arg Pro Glu Leu Gln Ile Pro Leu Phe Gly Val Phe Leu
 20 25 30

 Val Ile Tyr Leu Ile Thr Val Val Gly Asn Leu Thr Met Ile Ile Leu
 35 40 45

 Thr Lys Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Ser Ile Arg
 50 55 60

 His Leu Ala Ser Val Asp Leu Gly Asn Ser Thr Val Ile Cys Pro Lys
 65 70 75 80

 Val Leu Ala Asn Phe Val Val Asp Arg Asn Thr Ile Ser Tyr Tyr Ala
 85 90 95

 Cys Ala Ala Gln Leu Ala Phe Phe Leu Met Phe Ile Ile Ser Glu Phe
 100 105 110

 Phe Ile Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

 Pro Leu Leu Tyr Tyr Val Ile Met Ser Gln Arg Leu Cys His Val Leu
 130 135 140

 Val Gly Ile Gln Tyr Leu Tyr Ser Thr Phe Gln Ala Leu Met Phe Thr
 145 150 155 160

 Ile Lys Ile Phe Thr Leu Thr Phe Cys Gly Ser Asn Val Ile Ser His
 165 170 175

 Phe Tyr Cys Asp Asp Val Pro Leu Leu Pro Met Leu Cys Ser Asn Ala
 180 185 190

Gln Glu Ile Glu Leu Leu Ser Ile Leu Phe Ser Val Phe Asn Leu Ile
 195 200 205

Ser Ser Phe Leu Ile Val Leu Val Ser Tyr Met Leu Ile Leu Leu Ala
 210 215 220

Ile Cys Gln Met His Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Thr Val Val Val Val Phe Tyr Gly Ser Leu Leu
 245 250 255

Phe Met Tyr Met Gln Pro Asn Ser Thr His Phe Phe Asp Thr Asp Lys
 260 265 270

Met Ala Ser Val Phe Tyr Thr Leu Val Ile Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Glu Glu Val Lys Asn Ala Phe Tyr Lys Leu
 290 295 300

Phe Glu Asn
 305

<210> 295
 <211> 936
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(933)
 <223>

<400> 295
 atg act ggg gga gga aat att aca gaa atc acc tat ttc atc ctg ctg 48
 Met Thr Gly Gly Gly Asn Ile Thr Glu Ile Thr Tyr Phe Ile Leu Leu
 1 5 10 15
 gga ttc tca gat ttt ccc agg atc ata aaa gtg ctc ttc act ata ttc 96
 Gly Phe Ser Asp Phe Pro Arg Ile Ile Lys Val Leu Phe Thr Ile Phe
 20 25 30
 ctg gtg atc tac att aca tct ctg gcc tgg aac ctc tcc ctc att gtt 144
 Leu Val Ile Tyr Ile Thr Ser Leu Ala Trp Asn Leu Ser Leu Ile Val
 35 40 45
 tta ata agg atg gat tcc cac ctc cat aca ccc atg tat ttc ttc ctc 192
 Leu Ile Arg Met Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

agt aac ctg tcc ttc ata gat gtc tgc tat atc agc tcc aca gtc ccc	240
Ser Asn Leu Ser Phe Ile Asp Val Cys Tyr Ile Ser Ser Thr Val Pro	
65 70 75 80	
aag atg ctc tcc aac ctc tta cag gaa cag caa act atc act ttt gtt	288
Lys Met Leu Ser Asn Leu Leu Gln Glu Gln Gln Thr Ile Thr Phe Val	
85 90 95	
ggg tgt att att cag tac ttt atc ttt tca acg atg gga ctg agt gag	336
Gly Cys Ile Ile Gln Tyr Phe Ile Phe Ser Thr Met Gly Leu Ser Glu	
100 105 110	
tct tgt ctc atg aca gcc atg gct tat gat cgt tat gct gcc att tgt	384
Ser Cys Leu Met Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys	
115 120 125	
aac ccc ctg ctc tat tca tcc atc atg tca ccc acc ctc tgt gtt tgg	432
Asn Pro Leu Leu Tyr Ser Ser Ile Met Ser Pro Thr Leu Cys Val Trp	
130 135 140	
atg gta ctg gga gcc tac atg act ggc ctc act gct tct tta ttc caa	480
Met Val Leu Gly Ala Tyr Met Thr Gly Leu Thr Ala Ser Leu Phe Gln	
145 150 155 160	
att ggt gct ttg ctt caa ctc cac ttc tgt ggg tct aat gtc atc aga	528
Ile Gly Ala Leu Leu Gln Leu His Phe Cys Gly Ser Asn Val Ile Arg	
165 170 175	
cat ttc ttc tgt gac atg ccc caa ctg tta atc ttg tcc tgt act gac	576
His Phe Phe Cys Asp Met Pro Gln Leu Leu Ile Leu Ser Cys Thr Asp	
180 185 190	
act ttc ttt gta cag gtc atg act gct ata tta acc atg ttc ttt ggg	624
Thr Phe Phe Val Gln Val Met Thr Ala Ile Leu Thr Met Phe Phe Gly	
195 200 205	
ata gca agt gcc cta gtt atc atg ata tcc tat ggc tat att ggc atc	672
Ile Ala Ser Ala Leu Val Ile Met Ile Ser Tyr Gly Tyr Ile Gly Ile	
210 215 220	
tcc atc atg aag atc act tca gct aaa ggc agg tcc aag gca ttc aac	720
Ser Ile Met Lys Ile Thr Ser Ala Lys Gly Arg Ser Lys Ala Phe Asn	
225 230 235 240	
acc tgt gct tct cat cta aca gct gtt tcc ctc ttc tat aca tca gga	768
Thr Cys Ala Ser His Leu Thr Ala Val Ser Leu Phe Tyr Thr Ser Gly	
245 250 255	
atc ttt gtc tat ttg agt tcc agc tct gga ggt tct tca agc ttt gac	816
Ile Phe Val Tyr Leu Ser Ser Ser Ser Gly Gly Ser Ser Ser Phe Asp	
260 265 270	
aga ttt gca tct gtt ttc tac act gtg gtc att ccc atg tta aat ccc	864
Arg Phe Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro	
275 280 285	
ttg att tac agt ttg agg aac aaa gaa att aaa gat gcc tta aag agg	912
Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu Lys Arg	
290 295 300	
ttg caa aag aga aag tgc tgc tga	936

Leu Gln Lys Arg Lys Cys Cys
305 310

<210> 296
<211> 311
<212> PRT
<213> Homo Sapiens

<400> 296

Met Thr Gly Gly Gly Asn Ile Thr Glu Ile Thr Tyr Phe Ile Leu Leu
1 5 10 15

Gly Phe Ser Asp Phe Pro Arg Ile Ile Lys Val Leu Phe Thr Ile Phe
20 25 30

Leu Val Ile Tyr Ile Thr Ser Leu Ala Trp Asn Leu Ser Leu Ile Val
35 40 45

Leu Ile Arg Met Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

Ser Asn Leu Ser Phe Ile Asp Val Cys Tyr Ile Ser Ser Thr Val Pro
65 70 75 80

Lys Met Leu Ser Asn Leu Leu Gln Glu Gln Gln Thr Ile Thr Phe Val
85 90 95

Gly Cys Ile Ile Gln Tyr Phe Ile Phe Ser Thr Met Gly Leu Ser Glu
100 105 110

Ser Cys Leu Met Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys
115 120 125

Asn Pro Leu Leu Tyr Ser Ser Ile Met Ser Pro Thr Leu Cys Val Trp
130 135 140

Met Val Leu Gly Ala Tyr Met Thr Gly Leu Thr Ala Ser Leu Phe Gln
145 150 155 160

Ile Gly Ala Leu Leu Gln Leu His Phe Cys Gly Ser Asn Val Ile Arg
165 170 175

His Phe Phe Cys Asp Met Pro Gln Leu Leu Ile Leu Ser Cys Thr Asp
180 185 190

Thr Phe Phe Val Gln Val Met Thr Ala Ile Leu Thr Met Phe Phe Gly
195 200 205

Ile Ala Ser Ala Leu Val Ile Met Ile Ser Tyr Gly Tyr Ile Gly Ile
 210 215 220

Ser Ile Met Lys Ile Thr Ser Ala Lys Gly Arg Ser Lys Ala Phe Asn
 225 230 235 240

Thr Cys Ala Ser His Leu Thr Ala Val Ser Leu Phe Tyr Thr Ser Gly
 245 250 255

Ile Phe Val Tyr Leu Ser Ser Ser Ser Gly Gly Ser Ser Ser Phe Asp
 260 265 270

Arg Phe Ala Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
 275 280 285

Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu Lys Arg
 290 295 300

Leu Gln Lys Arg Lys Cys Cys
 305 310

<210> 297
 <211> 951
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(948)
 <223>

<400> 297
 atg gag aat gtc act aca atg aat gag ttt ctt cta ctt ggc ctg act 48
 Met Glu Asn Val Thr Thr Met Asn Glu Phe Leu Leu Leu Gly Leu Thr
 1 5 10 15
 ggt gtt cag gag ctg cag cct ttc ttc ttt ggg att ttc tta atc att 96
 Gly Val Gln Glu Leu Gln Pro Phe Phe Phe Gly Ile Phe Leu Ile Ile
 20 25 30
 tac ctg ata aac ttg att gga aat gga tct ata ttg gtg atg gtt gtt 144
 Tyr Leu Ile Asn Leu Ile Gly Asn Gly Ser Ile Leu Val Met Val Val
 35 40 45
 ttg gaa cca caa ctc cac tcc cct atg tat ttt ttt ctg gga aac ctt 192
 Leu Glu Pro Gln Leu His Ser Pro Met Tyr Phe Phe Leu Gly Asn Leu
 50 55 60
 tct tgt ctg gat att tct tat tct tca gtg aca ctg ccc aag ctg ctc 240
 Ser Cys Leu Asp Ile Ser Tyr Ser Ser Val Thr Leu Pro Lys Leu Leu
 65 70 75 80

gta aac ctc gtg tgc agt cgc agg gct ata tct ttt cta ggc tgt atc Val Asn Leu Val Cys Ser Arg Arg Ala Ile Ser Phe Leu Gly Cys Ile 85 .90 95	288
acc cag cta cac ttc ttc cac ttt ttg gga agc aca gag gcc att tta Thr Gln Leu His Phe Phe His Phe Leu Gly Ser Thr Glu Ala Ile Leu 100 105 110	336
ctg gct atc atg gcc ttt gac cgt ttt gtt gcc atc tgc aat cct ctt Leu Ala Ile Met Ala Phe Asp Arg Phe Val Ala Ile Cys Asn Pro Leu 115 120 125	384
cgc tac act gtc atc atg aac ccc cag gtg tgt att ctg ttg gca gct Arg Tyr Thr Val Ile Met Asn Pro Gln Val Cys Ile Leu Leu Ala Ala 130 135 140	432
gcg gcc tgg ctc atc agc ttc ttt tac gct ctg atg cat tct gtc atg Ala Ala Trp Leu Ile Ser Phe Phe Tyr Ala Leu Met His Ser Val Met 145 150 155 160	480
act gca cac ctg agt ttt tgt ggc tct cag aaa ctc aat cac ttc ttc Thr Ala His Leu Ser Phe Cys Gly Ser Gln Lys Leu Asn His Phe Phe 165 170 175	528
tac gat gtc aag ccg ctc tta gaa ttg gcc tgt agt gac aca tta ctc Tyr Asp Val Lys Pro Leu Leu Glu Leu Ala Cys Ser Asp Thr Leu Leu 180 185 190	576
aat caa tgg ctt ctt tcc att gtc aca ggc agc ata tcc atg gga gct Asn Gln Trp Leu Leu Ser Ile Val Thr Gly Ser Ile Ser Met Gly Ala 195 200 205	624
ttc ttt ctg act ctt ctc tcc tgc ttc tat gta att ggc ttc ctt ctg Phe Phe Leu Thr Leu Leu Ser Cys Phe Tyr Val Ile Gly Phe Leu Leu 210 215 220	672
ttt aag aac agg tcc tgc aga ata ctc cac aag gct ctg tcc act tgt Phe Lys Asn Arg Ser Cys Arg Ile Leu His Lys Ala Leu Ser Thr Cys 225 230 235 240	720
gcc tcc cat ttt atg gtg gta tgt ctt ttc tat gga cct gtg ggc ttc Ala Ser His Phe Met Val Val Cys Leu Phe Tyr Gly Pro Val Gly Phe 245 250 255	768
aca tat att cgt cct gct tca gcc acc tcc atg att cag gac cgg ata Thr Tyr Ile Arg Pro Ala Ser Ala Thr Ser Met Ile Gln Asp Arg Ile 260 265 270	816
atg gcc atc atg tat agc gcc gtc acc cct gta ctg aat cca cta atc Met Ala Ile Met Tyr Ser Ala Val Thr Pro Val Leu Asn Pro Leu Ile 275 280 285	864
tac acc ctt agg aac aaa gaa gtg atg atg gct ctg aag aaa atc ttt Tyr Thr Leu Arg Asn Lys Glu Val Met Met Ala Leu Lys Lys Ile Phe 290 295 300	912
ggg agg aag ttg ttt aaa gac tgg cag caa cac cac tag Gly Arg Lys Leu Phe Lys Asp Trp Gln Gln His His 305 310 315	951

<210> 298
 <211> 316
 <212> PRT
 <213> Homo Sapiens

<400> 298

Met Glu Asn Val Thr Thr Met Asn Glu Phe Leu Leu Leu Gly Leu Thr
 1 5 10 15

Gly Val Gln Glu Leu Gln Pro Phe Phe Phe Gly Ile Phe Leu Ile Ile
 20 25 30

Tyr Leu Ile Asn Leu Ile Gly Asn Gly Ser Ile Leu Val Met Val Val
 35 40 45

Leu Glu Pro Gln Leu His Ser Pro Met Tyr Phe Phe Leu Gly Asn Leu
 50 55 60

Ser Cys Leu Asp Ile Ser Tyr Ser Ser Val Thr Leu Pro Lys Leu Leu
 65 70 75 80

Val Asn Leu Val Cys Ser Arg Arg Ala Ile Ser Phe Leu Gly Cys Ile
 85 90 95

Thr Gln Leu His Phe Phe His Phe Leu Gly Ser Thr Glu Ala Ile Leu
 100 105 110

Leu Ala Ile Met Ala Phe Asp Arg Phe Val Ala Ile Cys Asn Pro Leu
 115 120 125

Arg Tyr Thr Val Ile Met Asn Pro Gln Val Cys Ile Leu Leu Ala Ala
 130 135 140

Ala Ala Trp Leu Ile Ser Phe Phe Tyr Ala Leu Met His Ser Val Met
 145 150 155 160

Thr Ala His Leu Ser Phe Cys Gly Ser Gln Lys Leu Asn His Phe Phe
 165 170 175

Tyr Asp Val Lys Pro Leu Leu Glu Leu Ala Cys Ser Asp Thr Leu Leu
 180 185 190

Asn Gln Trp Leu Leu Ser Ile Val Thr Gly Ser Ile Ser Met Gly Ala
 195 200 205

Phe Phe Leu Thr Leu Leu Ser Cys Phe Tyr Val Ile Gly Phe Leu Leu

210	215	220
Phe Lys Asn Arg Ser Cys Arg Ile Leu His Lys Ala Leu Ser Thr Cys		
225	230	235 240
Ala Ser His Phe Met Val Val Cys Leu Phe Tyr Gly Pro Val Gly Phe		
	245	250 255
Thr Tyr Ile Arg Pro Ala Ser Ala Thr Ser Met Ile Gln Asp Arg Ile		
	260	265 270
Met Ala Ile Met Tyr Ser Ala Val Thr Pro Val Leu Asn Pro Leu Ile		
	275	280 285
Tyr Thr Leu Arg Asn Lys Glu Val Met Met Ala Leu Lys Lys Ile Phe		
	290	295 300
Gly Arg Lys Leu Phe Lys Asp Trp Gln Gln His His		
305	310	315

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Met Glu Ala Ala Asn Glu Ser Ser Glu Gly Ile Ser Phe Val Leu Leu	
1 5 10 15	
gga ctg aca aca agt cct gga cag cag cgg cct ctc ttt gtg ctg ttc	96
Gly Leu Thr Thr Ser Pro Gly Gln Gln Arg Pro Leu Phe Val Leu Phe	
20 25 30	
ttg ctc ttg tat gtg gcc agc ctc ctg ggt aat gga ctc att gtg gct	144
Leu Leu Leu Tyr Val Ala Ser Leu Leu Gly Asn Gly Leu Ile Val Ala	
35 40 45	
gcc atc cag gcc agt cca gcc ctt cat gca ccc atg tac ttc ctg ctg	192
Ala Ile Gln Ala Ser Pro Ala Leu His Ala Pro Met Tyr Phe Leu Leu	
50 55 60	
gcc cac ctg tcc ttt gct gac ctc tgt ttc gcc tcc gtc act gtg ccc	240
Ala His Leu Ser Phe Ala Asp Leu Cys Phe Ala Ser Val Thr Val Pro	
65 70 75 80	
aag atg ttg gcc aac ttg ttg gcc cat gac cac tcc atc tcg ctg gct	288
Lys Met Leu Ala Asn Leu Leu Ala His Asp His Ser Ile Ser Leu Ala	

85										90					95					
ggc tgc ctg acc caa atg tac ttc ttc ttt gcc ctg ggg gta act gat	336																			
Gly Cys Leu Thr Gln Met Tyr Phe Phe Phe Ala Leu Gly Val Thr Asp																				
100 105 110																				
agc tgt ctt ctg gcg gcc atg gcc tat gac tgc tac gtg gcc atc cgg	384																			
Ser Cys Leu Leu Ala Ala Met Ala Tyr Asp Cys Tyr Val Ala Ile Arg																				
115 120 125																				
cac ccc ctc ccc tat gcc acg agg atg tcc cgg gcc atg tgc gca gcc	432																			
His Pro Leu Pro Tyr Ala Thr Arg Met Ser Arg Ala Met Cys Ala Ala																				
130 135 140																				
ctg gtg gga atg gca tgg ctg gtg tcc cac gtc cac tcc ctc ctg tat	480																			
Leu Val Gly Met Ala Trp Leu Val Ser His Val His Ser Leu Leu Tyr																				
145 150 155 160																				
atc ctg ctc atg gct cgc ttg tcc ttc tgt gct tcc cac caa gtg ccc	528																			
Ile Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Ser His Gln Val Pro																				
165 170 175																				
cac ttc ttc tgt gac cac cag cct ctc tta agg ctc tcg tgc tct gac	576																			
His Phe Phe Cys Asp His Gln Pro Leu Leu Arg Leu Ser Cys Ser Asp																				
180 185 190																				
acc cac cac atc cag ctg ctc atc ttc acc gag ggc gcc gca gtg gtg	624																			
Thr His His Ile Gln Leu Leu Ile Phe Thr Glu Gly Ala Ala Val Val																				
195 200 205																				
gtc act ccc ttc ctg ctc atc ctc gcc tcc tat ggg gcc atc gca gct	672																			
Val Thr Pro Phe Leu Leu Ile Leu Ala Ser Tyr Gly Ala Ile Ala Ala																				
210 215 220																				
gcc gtg ctc cag ctg ccc tca gcc tct ggg agg ctc cgg gct gtg tcc	720																			
Ala Val Leu Gln Leu Pro Ser Ala Ser Gly Arg Leu Arg Ala Val Ser																				
225 230 235 240																				
acc tgt ggc tcc cac ctg gct gtg gtg agc ctc ttc tat ggg aca gtc	768																			
Thr Cys Gly Ser His Leu Ala Val Val Ser Leu Phe Tyr Gly Thr Val																				
245 250 255																				
att gca gtc tac ttc cag gcc aca tcc cga cgc gag gca gag tgg ggc	816																			
Ile Ala Val Tyr Phe Gln Ala Thr Ser Arg Arg Glu Ala Glu Trp Gly																				
260 265 270																				
cgt gtg gcc act gtc atg tac act gta gtc acc ccc atg ctg aac ccc	864																			
Arg Val Ala Thr Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro																				
275 280 285																				
atc atc tac agc ctc tgg aat cgc gat gta cag ggg gca ctc cga gcc	912																			
Ile Ile Tyr Ser Leu Trp Asn Arg Asp Val Gln Gly Ala Leu Arg Ala																				
290 295 300																				
ctt ctc att ggg cga agg atc tca gct agt gac tcc tga	951																			
Leu Leu Ile Gly Arg Arg Ile Ser Ala Ser Asp Ser																				
305 310 315																				

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<211> 316

<212> PRT

<213> Homo Sapiens

<400> 300

Met Glu Ala Ala Asn Glu Ser Ser Glu Gly Ile Ser Phe Val Leu Leu
 1 5 10 15

Gly Leu Thr Thr Ser Pro Gly Gln Gln Arg Pro Leu Phe Val Leu Phe
 20 25 30

Leu Leu Leu Tyr Val Ala Ser Leu Leu Gly Asn Gly Leu Ile Val Ala
 35 40 45

Ala Ile Gln Ala Ser Pro Ala Leu His Ala Pro Met Tyr Phe Leu Leu
 50 55 60

Ala His Leu Ser Phe Ala Asp Leu Cys Phe Ala Ser Val Thr Val Pro
 65 70 75 80

Lys Met Leu Ala Asn Leu Leu Ala His Asp His Ser Ile Ser Leu Ala
 85 90 95

Gly Cys Leu Thr Gln Met Tyr Phe Phe Phe Ala Leu Gly Val Thr Asp
 100 105 110

Ser Cys Leu Leu Ala Ala Met Ala Tyr Asp Cys Tyr Val Ala Ile Arg
 115 120 125

His Pro Leu Pro Tyr Ala Thr Arg Met Ser Arg Ala Met Cys Ala Ala
 130 135 140

Leu Val Gly Met Ala Trp Leu Val Ser His Val His Ser Leu Leu Tyr
 145 150 155 160

Ile Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Ser His Gln Val Pro
 165 170 175

His Phe Phe Cys Asp His Gln Pro Leu Leu Arg Leu Ser Cys Ser Asp
 180 185 190

Thr His His Ile Gln Leu Leu Ile Phe Thr Glu Gly Ala Ala Val Val
 195 200 205

Val Thr Pro Phe Leu Leu Ile Leu Ala Ser Tyr Gly Ala Ile Ala Ala
 210 215 220

Ala Val Leu Gln Leu Pro Ser Ala Ser Gly Arg Leu Arg Ala Val Ser
225 230 235 240

Thr Cys Gly Ser His Leu Ala Val Val Ser Leu Phe Tyr Gly Thr Val
245 250 255

Ile Ala Val Tyr Phe Gln Ala Thr Ser Arg Arg Glu Ala Glu Trp Gly
260 265 270

Arg Val Ala Thr Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro
275 280 285

Ile Ile Tyr Ser Leu Trp Asn Arg Asp Val Gln Gly Ala Leu Arg Ala
290 295 300

Leu Leu Ile Gly Arg Arg Ile Ser Ala Ser Asp Ser
305 310 315

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<212> DNA
<213> Homo Sapiens

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Met Glu Gln Val Asn Lys Thr Val Val Arg Glu Phe Val Val Leu Gly
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ttc tca tcc ctg gcc agg ctg cag cag ctg ctc ttt gtt atc ttc ctg 96
Phe Ser Ser Leu Ala Arg Leu Gln Gln Leu Leu Phe Val Ile Phe Leu
20 25 30
ctc ctc tac ctg ttc act ctg ggc acc aat gca atc atc att tcc acc 144
Leu Leu Tyr Leu Phe Thr Leu Gly Thr Asn Ala Ile Ile Ile Ser Thr
35 40 45
att gtg ctg gac aga gcc ctt cat act ccc atg tac ttc ttc ctt gcc 192
Ile Val Leu Asp Arg Ala Leu His Thr Pro Met Tyr Phe Phe Leu Ala
50 55 60
atc ctt tct tgc tct gag att tgc tat acc ttt gtc att gta ccc aag 240
Ile Leu Ser Cys Ser Glu Ile Cys Tyr Thr Phe Val Ile Val Pro Lys
65 70 75 80
atg ctg gtt gac ctg ctg tcc cag aag aag acc att tct ttc ctg ggc 288
Met Leu Val Asp Leu Leu Ser Gln Lys Lys Thr Ile Ser Phe Leu Gly
85 90 95
tgt gcc atc caa atg ttt tcc ttc ctc ttc ttt ggc tcc tct cac tcc 336

Cys Ala Ile Gln Met Phe Ser Phe Leu Phe Phe Gly Ser Ser His Ser
 100 105 110
 ttc ctg ctg gca gcc atg ggc tat gat cgc tat atg gcc atc tgt aac 384
 Phe Leu Leu Ala Ala Met Gly Tyr Asp Arg Tyr Met Ala Ile Cys Asn
 115 120 125
 cca ctg cgc tac tca gtg ctc atg gga cat ggg gtg tgt atg gga cta 432
 Pro Leu Arg Tyr Ser Val Leu Met Gly His Gly Val Cys Met Gly Leu
 130 135 140
 atg gct gct gcc tgt gcc tgt ggc ttc act gtc tcc ctg gtc acc acc 480
 Met Ala Ala Ala Cys Ala Cys Gly Phe Thr Val Ser Leu Val Thr Thr
 145 150 155 160
 tcc cta gta ttt cat ctg ccc ttc cac tcc tcc aac cag ctc cat cac 528
 Ser Leu Val Phe His Leu Pro Phe His Ser Ser Asn Gln Leu His His
 165 170 175
 ttc ttc tgt gac atc tcc cct gtc ctt aaa ctg gca tct cag cac tcc 576
 Phe Phe Cys Asp Ile Ser Pro Val Leu Lys Leu Ala Ser Gln His Ser
 180 185 190
 ggc ttc agt cag ctg gtc ata ttc atg ctt ggt gta ttt gcc ttg gtc 624
 Gly Phe Ser Gln Leu Val Ile Phe Met Leu Gly Val Phe Ala Leu Val
 195 200 205
 att cct ctg cta ctt atc cta gtc tcc tac atc cgc atc atc tct gcc 672
 Ile Pro Leu Leu Leu Ile Leu Val Ser Tyr Ile Arg Ile Ile Ser Ala
 210 215 220
 att cta aaa atc cct tcc tcc gtt gga aga tac aag acc ttc tcc acc 720
 Ile Leu Lys Ile Pro Ser Ser Val Gly Arg Tyr Lys Thr Phe Ser Thr
 225 230 235 240
 tgt gcc tcc cat ctc att gtg gta act gtt cac tac agt tgt gcc tct 768
 Cys Ala Ser His Leu Ile Val Val Thr Val His Tyr Ser Cys Ala Ser
 245 250 255
 ttc atc tac tta agg ccc aag act aat tac act tca agc caa gac acc 816
 Phe Ile Tyr Leu Arg Pro Lys Thr Asn Tyr Thr Ser Ser Gln Asp Thr
 260 265 270
 cta ata tct gtg tca tac acc atc ctt acc cca ttg ttc aat cca atg 864
 Leu Ile Ser Val Ser Tyr Thr Ile Leu Thr Pro Leu Phe Asn Pro Met
 275 280 285
 att tat agt ctg aga aat aag gaa ttc aaa tca gcc cta cga aga aca 912
 Ile Tyr Ser Leu Arg Asn Lys Glu Phe Lys Ser Ala Leu Arg Arg Thr
 290 295 300
 atc ggc caa act ttc tat cct ctt agt taa 942
 Ile Gly Gln Thr Phe Tyr Pro Leu Ser
 305 310

<210> 302
 <211> 313
 <212> PRT
 <213> Homo Sapiens

<400> 302

Met Glu Gln Val Asn Lys Thr Val Val Arg Glu Phe Val Val Leu Gly
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Phe Ser Ser Leu Ala Arg Leu Gln Gln Leu Leu Phe Val Ile Phe Leu
20 25 30

Leu Leu Tyr Leu Phe Thr Leu Gly Thr Asn Ala Ile Ile Ile Ser Thr
35 40 45

Ile Val Leu Asp Arg Ala Leu His Thr Pro Met Tyr Phe Phe Leu Ala
50 55 60

Ile Leu Ser Cys Ser Glu Ile Cys Tyr Thr Phe Val Ile Val Pro Lys
65 70 75 80

Met Leu Val Asp Leu Leu Ser Gln Lys Lys Thr Ile Ser Phe Leu Gly
85 90 95

Cys Ala Ile Gln Met Phe Ser Phe Leu Phe Phe Gly Ser Ser His Ser
100 105 110

Phe Leu Leu Ala Ala Met Gly Tyr Asp Arg Tyr Met Ala Ile Cys Asn
115 120 125

Pro Leu Arg Tyr Ser Val Leu Met Gly His Gly Val Cys Met Gly Leu
130 135 140

Met Ala Ala Ala Cys Ala Cys Gly Phe Thr Val Ser Leu Val Thr Thr
145 150 155 160

Ser Leu Val Phe His Leu Pro Phe His Ser Ser Asn Gln Leu His His
165 170 175

Phe Phe Cys Asp Ile Ser Pro Val Leu Lys Leu Ala Ser Gln His Ser
180 185 190

Gly Phe Ser Gln Leu Val Ile Phe Met Leu Gly Val Phe Ala Leu Val
195 200 205

Ile Pro Leu Leu Leu Ile Leu Val Ser Tyr Ile Arg Ile Ile Ser Ala
210 215 220

Ile Leu Lys Ile Pro Ser Ser Val Gly Arg Tyr Lys Thr Phe Ser Thr
225 230 235 240

[illegible]

gtg ctg ttg gca gtt atg gcc tat gat cgc tac ctg gcc atc tgt gga 384
Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gly
115 120 125

ccc ctc ctt tac cct agt ctc atg cct tcc agt ctg gcc act cgc ctt 432
Pro Leu Leu Tyr Pro Ser Leu Met Pro Ser Ser Leu Ala Thr Arg Leu
130 135 140

gct gct gcc tct tgg ggc agt ggc ttc ttc agc tcc atg atg aag ctt 480
Ala Ala Ala Ser Trp Gly Ser Gly Phe Phe Ser Ser Met Met Lys Leu
145 150 155 160

ctt ttt att tcc caa ttg tcc tac tgt gga ccc aac att atc aac cac 528
Leu Phe Ile Ser Gln Leu Ser Tyr Cys Gly Pro Asn Ile Ile Asn His
165 170 175

ttt ttc tgt gat att tcc cca cta ctc aac ctc acc tgc tct gac aag 576
Phe Phe Cys Asp Ile Ser Pro Leu Leu Asn Leu Thr Cys Ser Asp Lys
180 185 190

gag caa gca gag cta gta gac ttc ctt ctg gcc ctg gtg atg att cta 624
Glu Gln Ala Glu Leu Val Asp Phe Leu Leu Ala Leu Val Met Ile Leu
195 200 205

ctc cct cta ttg gct gtg gtt tca tca tac act gcc atc att gca gcc 672
Leu Pro Leu Leu Ala Val Val Ser Ser Tyr Thr Ala Ile Ile Ala Ala
210 215 220

atc ctg agg atc cct acg tcc agg gga cgc cac aaa gcc ttt tcc act 720
Ile Leu Arg Ile Pro Thr Ser Arg Gly Arg His Lys Ala Phe Ser Thr
225 230 235 240

tgt gcc gct cat ctg gca gtg gtt gtt atc tac tac tcc tcc act ctc 768
Cys Ala Ala His Leu Ala Val Val Val Ile Tyr Tyr Ser Ser Thr Leu
245 250 255

ttc acc tat gca cgg ccc cgg gcc atg tac acc ttc aac cac aac aag 816
Phe Thr Tyr Ala Arg Pro Arg Ala Met Tyr Thr Phe Asn His Asn Lys
260 265 270

att atc tct gtg ctc tac act atc att gta cca ttc ttc aac cca gcc 864
Ile Ile Ser Val Leu Tyr Thr Ile Ile Val Pro Phe Phe Asn Pro Ala
275 280 285

atc tac tgc ctg agg aac aag gag gtg aag gag gcc ttc agg aag aca 912
Ile Tyr Cys Leu Arg Asn Lys Glu Val Lys Glu Ala Phe Arg Lys Thr
290 295 300

gtg atg ggc aga tgt cac tat cct agg gat gtt cag gac tga 954
Val Met Gly Arg Cys His Tyr Pro Arg Asp Val Gln Asp
305 310 315

<210> 304
<211> 317
<212> PRT
<213> Homo Sapiens

<400> 304

Met Arg Asn Leu Ser Gly Gly His Val Glu Glu Phe Val Leu Val Gly

1	5	10	15
Phe Pro Thr Thr Pro Pro Leu Gln Leu Leu Leu Phe Val Leu Phe Phe	20	25	30
Ala Ile Tyr Leu Leu Thr Leu Leu Glu Asn Ala Leu Ile Val Phe Thr	35	40	45
Ile Trp Leu Ala Pro Ser Leu His Arg Pro Met Tyr Phe Phe Leu Gly	50	55	60
His Leu Ser Phe Leu Glu Leu Trp Tyr Ile Asn Val Thr Ile Pro Arg	65	70	75
Leu Leu Ala Ala Phe Leu Thr Gln Asp Gly Arg Val Ser Tyr Val Gly	85	90	95
Cys Met Thr Gln Leu Tyr Phe Phe Ile Ala Leu Ala Cys Thr Glu Cys	100	105	110
Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gly	115	120	125
Pro Leu Leu Tyr Pro Ser Leu Met Pro Ser Ser Leu Ala Thr Arg Leu	130	135	140
Ala Ala Ala Ser Trp Gly Ser Gly Phe Phe Ser Ser Met Met Lys Leu	145	150	155
Leu Phe Ile Ser Gln Leu Ser Tyr Cys Gly Pro Asn Ile Ile Asn His	165	170	175
Phe Phe Cys Asp Ile Ser Pro Leu Leu Asn Leu Thr Cys Ser Asp Lys	180	185	190
Glu Gln Ala Glu Leu Val Asp Phe Leu Leu Ala Leu Val Met Ile Leu	195	200	205
Leu Pro Leu Leu Ala Val Val Ser Ser Tyr Thr Ala Ile Ile Ala Ala	210	215	220
Ile Leu Arg Ile Pro Thr Ser Arg Gly Arg His Lys Ala Phe Ser Thr	225	230	235
Cys Ala Ala His Leu Ala Val Val Val Ile Tyr Tyr Ser Ser Thr Leu	245	250	255

Phe Thr Tyr Ala Arg Pro Arg Ala Met Tyr Thr Phe Asn His Asn Lys
 260 265 270

Ile Ile Ser Val Leu Tyr Thr Ile Ile Val Pro Phe Phe Asn Pro Ala
 275 280 285

Ile Tyr Cys Leu Arg Asn Lys Glu Val Lys Glu Ala Phe Arg Lys Thr
 290 295 300

Val Met Gly Arg Cys His Tyr Pro Arg Asp Val Gln Asp
 305 310 315

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 <211> 930
 <212> DNA
 <213> Homo Sapiens

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 <222> (1)..(927)
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 Met Lys Ile Asn Gln Thr Ile Leu Lys Glu Phe Ile Leu Val Gly Phe
 1 5 10 15
 tct gtg tac cca cat gta cag aca ttt ctt ttt gtg gtc ttc ttt tgt 96
 Ser Val Tyr Pro His Val Gln Thr Phe Leu Phe Val Val Phe Phe Cys
 20 25 30
 ctc tac ctt ctc acc ctt gca ggt aat ctg atc atc atg ggt cta act 144
 Leu Tyr Leu Leu Thr Leu Ala Gly Asn Leu Ile Ile Met Gly Leu Thr
 35 40 45
 tgg gtg gac agg tcc ctc cac acc cct atg tat ctc ttc ctt agt gca 192
 Trp Val Asp Arg Ser Leu His Thr Pro Met Tyr Leu Phe Leu Ser Ala
 50 55 60
 ctc tcc ttc tct gag acc tgc tat acg ctg acc atc gtc ccc aag atg 240
 Leu Ser Phe Ser Glu Thr Cys Tyr Thr Leu Thr Ile Val Pro Lys Met
 65 70 75 80
 ctg gaa gat cta ctg gcc aag gac aga agc att tca gtc aca ggt tgt 288
 Leu Glu Asp Leu Leu Ala Lys Asp Arg Ser Ile Ser Val Thr Gly Cys
 85 90 95
 agc tta cag atg tgc ttc ttc ttg gga ctt ggt ggc aca aac tgt atc 336
 Ser Leu Gln Met Cys Phe Phe Leu Gly Leu Gly Gly Thr Asn Cys Ile
 100 105 110
 att ctc act ttg atg gga tat gac cgc ttc ctg gcc atc tgt aac cct 384
 Ile Leu Thr Leu Met Gly Tyr Asp Arg Phe Leu Ala Ile Cys Asn Pro
 115 120 125

cta aga tat cca ctg ctt atg acc aac att gta tgt gga caa ctt gtg 432
 Leu Arg Tyr Pro Leu Leu Met Thr Asn Ile Val Cys Gly Gln Leu Val
 130 135 140

gcc tct gct tgc act gca ggc ttc ttt atc tct ctt aca gag act gca 480
 Ala Ser Ala Cys Thr Ala Gly Phe Phe Ile Ser Leu Thr Glu Thr Ala
 145 150 155 160

ctg ata ttc agg gac tct ttc tgc aga ccc aac ctt gtc aaa cac ttc 528
 Leu Ile Phe Arg Asp Ser Phe Cys Arg Pro Asn Leu Val Lys His Phe
 165 170 175

ttc tgc cat atg ctg gca gtt att agg ctg tct tgt ata gac agt aac 576
 Phe Cys His Met Leu Ala Val Ile Arg Leu Ser Cys Ile Asp Ser Asn
 180 185 190

cac aca gaa ttc att ata aca ctg atc tca gtg tct ggt ttg ctg ggt 624
 His Thr Glu Phe Ile Ile Thr Leu Ile Ser Val Ser Gly Leu Leu Gly
 195 200 205

acc ctt ctg ctc atc atc ctg act gat gtc ttc att att tct act gtc 672
 Thr Leu Leu Leu Ile Ile Leu Thr Asp Val Phe Ile Ile Ser Thr Val
 210 215 220

ctc agg atc cct tca gct gag ggc aag cag aag gcc ttc acc acc tgt 720
 Leu Arg Ile Pro Ser Ala Glu Gly Lys Gln Lys Ala Phe Thr Thr Cys
 225 230 235 240

gcc tcc cac ctc acc gtg gtt ata atc cac ttt ggt ttt gca tct att 768
 Ala Ser His Leu Thr Val Val Ile Ile His Phe Gly Phe Ala Ser Ile
 245 250 255

gtt tat ttg aag cca gaa gcc tca gga gat gac aca ctc ata gca gtc 816
 Val Tyr Leu Lys Pro Glu Ala Ser Gly Asp Asp Thr Leu Ile Ala Val
 260 265 270

cct tat act gtc att acc ccc ttc ctc agc ccc atc ata ttc agc ctg 864
 Pro Tyr Thr Val Ile Thr Pro Phe Leu Ser Pro Ile Ile Phe Ser Leu
 275 280 285

agg aat aag gac atg aaa aat gct ttt aga aga atg atg gga aac aca 912
 Arg Asn Lys Asp Met Lys Asn Ala Phe Arg Arg Met Met Gly Asn Thr
 290 295 300

gtt gcc ttg aaa aaa taa 930
 Val Ala Leu Lys Lys
 305

<210> 306

<211> 309

<212> PRT

<213> Homo Sapiens

<400> 306

Met Lys Ile Asn Gln Thr Ile Leu Lys Glu Phe Ile Leu Val Gly Phe
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Ser Val Tyr Pro His Val Gln Thr Phe Leu Phe Val Val Phe Phe Cys
20 25 30

Leu Tyr Leu Leu Thr Leu Ala Gly Asn Leu Ile Ile Met Gly Leu Thr
35 40 45

Trp Val Asp Arg Ser Leu His Thr Pro Met Tyr Leu Phe Leu Ser Ala
50 55 60

Leu Ser Phe Ser Glu Thr Cys Tyr Thr Leu Thr Ile Val Pro Lys Met
65 70 75 80

Leu Glu Asp Leu Leu Ala Lys Asp Arg Ser Ile Ser Val Thr Gly Cys
85 90 95

Ser Leu Gln Met Cys Phe Phe Leu Gly Leu Gly Gly Thr Asn Cys Ile
100 105 110

Ile Leu Thr Leu Met Gly Tyr Asp Arg Phe Leu Ala Ile Cys Asn Pro
115 120 125

Leu Arg Tyr Pro Leu Leu Met Thr Asn Ile Val Cys Gly Gln Leu Val
130 135 140

Ala Ser Ala Cys Thr Ala Gly Phe Phe Ile Ser Leu Thr Glu Thr Ala
145 150 155 160

Leu Ile Phe Arg Asp Ser Phe Cys Arg Pro Asn Leu Val Lys His Phe
165 170 175

Phe Cys His Met Leu Ala Val Ile Arg Leu Ser Cys Ile Asp Ser Asn
180 185 190

His Thr Glu Phe Ile Ile Thr Leu Ile Ser Val Ser Gly Leu Leu Gly
195 200 205

Thr Leu Leu Leu Ile Ile Leu Thr Asp Val Phe Ile Ile Ser Thr Val
210 215 220

Leu Arg Ile Pro Ser Ala Glu Gly Lys Gln Lys Ala Phe Thr Thr Cys
225 230 235 240

Ala Ser His Leu Thr Val Val Ile Ile His Phe Gly Phe Ala Ser Ile
245 250 255

Val Tyr Leu Lys Pro Glu Ala Ser Gly Asp Asp Thr Leu Ile Ala Val

260	265	270	
Pro Tyr Thr Val Ile Thr Pro Phe Leu Ser Pro Ile Ile Phe Ser Leu			
275	280	285	
Arg Asn Lys Asp Met Lys Asn Ala Phe Arg Arg Met Met Gly Asn Thr			
290	295	300	
Val Ala Leu Lys Lys			
305			
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Met Glu Pro Gln Asn Thr Ser Thr Val Thr Asn Phe Gln Leu Leu Gly			
1 5 10 15			
ttc cag aac ctt ctt gaa tgg cag gcc ctg ctc ttt gtc att ttc ctg			96
Phe Gln Asn Leu Leu Glu Trp Gln Ala Leu Leu Phe Val Ile Phe Leu			
20 25 30			
ctc atc tac tgc ctg acc att ata ggg aat gtt gtc atc atc acc gtg			144
Leu Ile Tyr Cys Leu Thr Ile Ile Gly Asn Val Val Ile Ile Thr Val			
35 40 45			
gtg agc cag ggc ctg cga ctg cac tcc cct atg tac atg ttc ctc cag			192
Val Ser Gln Gly Leu Arg Leu His Ser Pro Met Tyr Met Phe Leu Gln			
50 55 60			
cat ctc tcc ttt ctg gag gtc tgg tac acg tcc acc act gtg ccc ctt			240
His Leu Ser Phe Leu Val Trp Tyr Thr Ser Thr Thr Val Pro Leu			
65 70 75 80			
ctc cta gcc aac ctg ctg tcc tgg ggc caa gcc atc tcc ttc tct gcc			288
Leu Leu Ala Asn Leu Leu Ser Trp Gly Gln Ala Ile Ser Phe Ser Ala			
85 90 95			
tgc atg gca cag ctc tac ttc ttc gta ttc ctc ggc gcc acc gag tgc			336
Cys Met Ala Gln Leu Tyr Phe Phe Val Phe Leu Gly Ala Thr Glu Cys			
100 105 110			
ttt ctc ctg gcc ttc atg gcc tat gac cgt tac ctg gcc atc tgc agc			384
Phe Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Ser			
115 120 125			
cca ctc cgc tac ccc ttt ctc atg cat cgt ggg cta tgt gcc agg ttg			432
Pro Leu Arg Tyr Pro Phe Leu Met His Arg Gly Leu Cys Ala Arg Leu			

130	135	140	
gtg gtg gtc tca tgg tgc aca ggg gtc agc aca ggc ttt ctg cat tcc			480
Val Val Val Ser Trp Cys Thr Gly Val Ser Thr Gly Phe Leu His Ser			
145	150	155	160
atg atg att tcc agg ttg gac ttc tgt ggg cgc aat cag att aac cat			528
Met Met Ile Ser Arg Leu Asp Phe Cys Gly Arg Asn Gln Ile Asn His			
	165	170	175
ttc ttc tgc gac ctc ccg cca ctc atg cag ctc tcc tgt tcc aga gtt			576
Phe Phe Cys Asp Leu Pro Pro Leu Met Gln Leu Ser Cys Ser Arg Val			
	180	185	190
tat atc acc gag gtg acc atc ttc atc ctg tca att gcc gtg ctg tgc			624
Tyr Ile Thr Glu Val Thr Ile Phe Ile Leu Ser Ile Ala Val Leu Cys			
	195	200	205
att tgt ttt ttt ctg aca ctg ggg ccc tat gtt ttc att gtg tcc tcc			672
Ile Cys Phe Phe Leu Thr Leu Gly Pro Tyr Val Phe Ile Val Ser Ser			
	210	215	220
ata ttg aga atc cct tcc acc tct ggc cgg aga aag acc ttt tcc aca			720
Ile Leu Arg Ile Pro Ser Thr Ser Gly Arg Arg Lys Thr Phe Ser Thr			
	225	230	235
tgt ggc tcc cac ctg gct gtt gtc act ctc tac tac ggg acc atg atc			768
Cys Gly Ser His Leu Ala Val Val Thr Leu Tyr Tyr Gly Thr Met Ile			
	245	250	255
tcc atg tat gtg tgt ccc agt ccc cac ctg ttg cct gaa atc aac aag			816
Ser Met Tyr Val Cys Pro Ser Pro His Leu Leu Pro Glu Ile Asn Lys			
	260	265	270
atc att tct gtc ttc tac act gtg gtc aca cca ctg ctg aac cca gtt			864
Ile Ile Ser Val Phe Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Val			
	275	280	285
atc tac agc ttg agg aac aaa gac ttc aaa gaa gct gtt aga aag gtc			912
Ile Tyr Ser Leu Arg Asn Lys Asp Phe Lys Glu Ala Val Arg Lys Val			
	290	295	300
atg aga agg aaa tgt ggt att cta tgg agt aca agt aaa agg aag ttc			960
Met Arg Arg Lys Cys Gly Ile Leu Trp Ser Thr Ser Lys Arg Lys Phe			
	305	310	315
ctt tattag			969
Leu			

<210> 308

<211> 321

<212> PRT

<213> Homo Sapiens

<400> 308

Met	Glu	Pro	Gln	Asn	Thr	Ser	Thr	Val	Thr	Asn	Phe	Gln	Leu	Leu	Gly
1				5					10					15	

Phe Gln Asn Leu Leu Glu Trp Gln Ala Leu Leu Phe Val Ile Phe Leu
 20 25 30

Leu Ile Tyr Cys Leu Thr Ile Ile Gly Asn Val Val Ile Ile Thr Val
 35 40 45

Val Ser Gln Gly Leu Arg Leu His Ser Pro Met Tyr Met Phe Leu Gln
 50 55 60

His Leu Ser Phe Leu Glu Val Trp Tyr Thr Ser Thr Thr Val Pro Leu
 65 70 75 80

Leu Leu Ala Asn Leu Leu Ser Trp Gly Gln Ala Ile Ser Phe Ser Ala
 85 90 95

Cys Met Ala Gln Leu Tyr Phe Phe Val Phe Leu Gly Ala Thr Glu Cys
 100 105 110

Phe Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Ser
 115 120 125

Pro Leu Arg Tyr Pro Phe Leu Met His Arg Gly Leu Cys Ala Arg Leu
 130 135 140

Val Val Val Ser Trp Cys Thr Gly Val Ser Thr Gly Phe Leu His Ser
 145 150 155 160

Met Met Ile Ser Arg Leu Asp Phe Cys Gly Arg Asn Gln Ile Asn His
 165 170 175

Phe Phe Cys Asp Leu Pro Pro Leu Met Gln Leu Ser Cys Ser Arg Val
 180 185 190

Tyr Ile Thr Glu Val Thr Ile Phe Ile Leu Ser Ile Ala Val Leu Cys
 195 200 205

Ile Cys Phe Phe Leu Thr Leu Gly Pro Tyr Val Phe Ile Val Ser Ser
 210 215 220

Ile Leu Arg Ile Pro Ser Thr Ser Gly Arg Arg Lys Thr Phe Ser Thr
 225 230 235 240

Cys Gly Ser His Leu Ala Val Val Thr Leu Tyr Tyr Gly Thr Met Ile
 245 250 255

Ser Met Tyr Val Cys Pro Ser Pro His Leu Leu Pro Glu Ile Asn Lys
 260 265 270

Ile Ile Ser Val Phe Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Val
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Phe Lys Glu Ala Val Arg Lys Val
 290 295 300

Met Arg Arg Lys Cys Gly Ile Leu Trp Ser Thr Ser Lys Arg Lys Phe
 305 310 315 320

Leu

<210> 309
 <211> 939
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (936)
 <223>

<400> 309
 atg gaa aat tac aat caa aca tca act gat ttc atc tta ttg ggg ctg 48
 Met Glu Asn Tyr Asn Gln Thr Ser Thr Asp Phe Ile Leu Leu Gly Leu
 1 5 10 15
 ttt cca cca tca ata att gac ctt ttc ttc ttc att ctc att gtt ttc 96
 Phe Pro Pro Ser Ile Ile Asp Leu Phe Phe Phe Ile Leu Ile Val Phe
 20 25 30
 att ttc ctg atg gct cta att gga aac ctg tcc atg att ctt ctc atc 144
 Ile Phe Leu Met Ala Leu Ile Gly Asn Leu Ser Met Ile Leu Leu Ile
 35 40 45
 ttc ttg gac acc cat ctc cac aca ccc atg tat ttc cta ctg agt cag 192
 Phe Leu Asp Thr His Leu His Thr Pro Met Tyr Phe Leu Leu Ser Gln
 50 55 60
 ctc tcc ctc att gac cta aat tac atc tcc acc att gtt cct aag atg 240
 Leu Ser Leu Ile Asp Leu Asn Tyr Ile Ser Thr Ile Val Pro Lys Met
 65 70 75 80
 gca tct gat ttt ctg cat gga aac aag tct atc tcc ttc act ggg tgt 288
 Ala Ser Asp Phe Leu His Gly Asn Lys Ser Ile Ser Phe Thr Gly Cys
 85 90 95
 ggg att cag agt ttc ttc ttc ttg gca tta gga ggt gca gaa gca cta 336
 Gly Ile Gln Ser Phe Phe Phe Leu Ala Leu Gly Gly Ala Glu Ala Leu
 100 105 110
 ctt ttg gca tct atg gcc tat gat cgt tac att gct att tgc ttt cct 384

Leu Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ile Ala Ile Cys Phe Pro
 115 120 125
 ctc cac tat ctc atc cgc atg agc aaa aga gtg tgt gtg ctg atg ata 432
 Leu His Tyr Leu Ile Arg Met Ser Lys Arg Val Cys Val Leu Met Ile
 130 135 140
 aca ggg tct tgg atc ata ggc tgc atc aat gct tgt gct cac act gta 480
 Thr Gly Ser Trp Ile Ile Gly Ser Ile Asn Ala Cys Ala His Thr Val
 145 150 155 160
 tat gta ctc cat att cct tat tgc cga tcc agg gcc atc aat cat ttc 528
 Tyr Val Leu His Ile Pro Tyr Cys Arg Ser Arg Ala Ile Asn His Phe
 165 170 175
 ttc tgt gat gtc cca gca atg gtg act ctg gcc tgc atg gac acc tgg 576
 Phe Cys Asp Val Pro Ala Met Val Thr Leu Ala Cys Met Asp Thr Trp
 180 185 190
 gtc tat gag ggc aca gtg ttt ttg agt gcc acc atc ttt ctc gtg ttt 624
 Val Tyr Glu Gly Thr Val Phe Leu Ser Ala Thr Ile Phe Leu Val Phe
 195 200 205
 ccc ttc att ggt att tca tgt tcc tat ggc cag gtt ctc ttt gct gtc 672
 Pro Phe Ile Gly Ile Ser Cys Ser Tyr Gly Gln Val Leu Phe Ala Val
 210 215 220
 tac cac atg aaa tct gca gaa ggg agg aag aaa gcc tat ttg acc tgc 720
 Tyr His Met Lys Ser Ala Glu Gly Arg Lys Lys Ala Tyr Leu Thr Cys
 225 230 235 240
 agc acc cac ctc act gta gta act ttc tac tat gca cct ttt gtc tac 768
 Ser Thr His Leu Thr Val Val Thr Phe Tyr Tyr Ala Pro Phe Val Tyr
 245 250 255
 act tat cta cgt cca aga tcc ctg cga tct cca aca gag gac aag gtt 816
 Thr Tyr Leu Arg Pro Arg Ser Leu Arg Ser Pro Thr Glu Asp Lys Val
 260 265 270
 ctg gct gtc ttc tac acc atc ctc acc cca atg ctc aac ccc atc atc 864
 Leu Ala Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Ile Ile
 275 280 285
 tat agc ctg agg aac aag gag gtg atg ggg gcc ctg aca cga gtg agt 912
 Tyr Ser Leu Arg Asn Lys Glu Val Met Gly Ala Leu Thr Arg Val Ser
 290 295 300
 cag aga atc tgc tct gtg aaa atg tag 939
 Gln Arg Ile Cys Ser Val Lys Met
 305 310

<210> 310
 <211> 312
 <212> PRT
 <213> Homo Sapiens

<400> 310

Met Glu Asn Tyr Asn Gln Thr Ser Thr Asp Phe Ile Leu Leu Gly Leu
 1 5 10 15

Phe Pro Pro Ser Ile Ile Asp Leu Phe Phe Phe Ile Leu Ile Val Phe
 20 25 30

Ile Phe Leu Met Ala Leu Ile Gly Asn Leu Ser Met Ile Leu Leu Ile
 35 40 45

Phe Leu Asp Thr His Leu His Thr Pro Met Tyr Phe Leu Leu Ser Gln
 50 55 60

Leu Ser Leu Ile Asp Leu Asn Tyr Ile Ser Thr Ile Val Pro Lys Met
 65 70 75 80

Ala Ser Asp Phe Leu His Gly Asn Lys Ser Ile Ser Phe Thr Gly Cys
 85 90 95

Gly Ile Gln Ser Phe Phe Phe Leu Ala Leu Gly Gly Ala Glu Ala Leu
 100 105 110

Leu Leu Ala Ser Met Ala Tyr Asp Arg Tyr Ile Ala Ile Cys Phe Pro
 115 120 125

Leu His Tyr Leu Ile Arg Met Ser Lys Arg Val Cys Val Leu Met Ile
 130 135 140

Thr Gly Ser Trp Ile Ile Gly Ser Ile Asn Ala Cys Ala His Thr Val
 145 150 155 160

Tyr Val Leu His Ile Pro Tyr Cys Arg Ser Arg Ala Ile Asn His Phe
 165 170 175

Phe Cys Asp Val Pro Ala Met Val Thr Leu Ala Cys Met Asp Thr Trp
 180 185 190

Val Tyr Glu Gly Thr Val Phe Leu Ser Ala Thr Ile Phe Leu Val Phe
 195 200 205

Pro Phe Ile Gly Ile Ser Cys Ser Tyr Gly Gln Val Leu Phe Ala Val
 210 215 220

Tyr His Met Lys Ser Ala Glu Gly Arg Lys Lys Ala Tyr Leu Thr Cys
 225 230 235 240

Ser Thr His Leu Thr Val Val Thr Phe Tyr Tyr Ala Pro Phe Val Tyr
 245 250 255

Thr Tyr Leu Arg Pro Arg Ser Leu Arg Ser Pro Thr Glu Asp Lys Val
 260 265 270

Leu Ala Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Ile Ile
 275 280 285

Tyr Ser Leu Arg Asn Lys Glu Val Met Gly Ala Leu Thr Arg Val Ser
 290 295 300

Gln Arg Ile Cys Ser Val Lys Met
 305 310

<210> 311
 <211> 870
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1) .. (867)
 <223>

<400> 311
 atg gaa aat ggg agc tat acc tct tat ttc att ctc cta gga ctc ttt 48
 Met Glu Asn Gly Ser Tyr Thr Ser Tyr Phe Ile Leu Leu Gly Leu Phe
 1 5 10 15
 aac cac acc aga gcc cac caa gtc ctc ttc atg atg gtt ctg agt atc 96
 Asn His Thr Arg Ala His Gln Val Leu Phe Met Met Val Leu Ser Ile
 20 25 30
 gtt ttg acc tcc ctg ttt ggc aat tcc ctc atg att ctc ctg att cac 144
 Val Leu Thr Ser Leu Phe Gly Asn Ser Leu Met Ile Leu Leu Ile His
 35 40 45
 tgg gac cac cgg ttc cac acg ccc atg tac ttc ctc ctg agc caa ctt 192
 Trp Asp His Arg Phe His Thr Pro Met Tyr Phe Leu Leu Ser Gln Leu
 50 55 60
 tcc ctc atg gac gtg atg ctg gtt tcc acc act gtg ccc aaa atg gcg 240
 Ser Leu Met Asp Val Met Leu Val Ser Thr Thr Val Pro Lys Met Ala
 65 70 75 80
 gct gac tac ttg acc gga agt aag gcc atc tcc cgc gct ggc tgt ggt 288
 Ala Asp Tyr Leu Thr Gly Ser Lys Ala Ile Ser Arg Ala Gly Cys Gly
 85 90 95
 gcg cag atc ttc ttc ctc ccc aca ctg ggt ggt gga gag tgc ttc ctc 336
 Ala Gln Ile Phe Phe Leu Pro Thr Leu Gly Gly Gly Glu Cys Phe Leu
 100 105 110
 tta gca gcc atg gcc tat gac cgc tat gcg gct gtc tgc cac cca ctc 384
 Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Val Cys His Pro Leu
 115 120 125

cga tat ccc act ctc atg agc tgg cag ctg tgc ctg agg atg aac ctg 432
 Arg Tyr Pro Thr Leu Met Ser Trp Gln Leu Cys Leu Arg Met Asn Leu
 130 135 140

tgg tgt tgg ctc ctg ggt gca gct gac ggg ctc ctg cag gct gtt gct 480
 Ser Cys Trp Leu Leu Gly Ala Ala Asp Gly Leu Leu Gln Ala Val Ala
 145 150 155 160

acc ctg agc ttc cca tat tgc ggt gca cac gag atc gat cac ttc ttc 528
 Thr Leu Ser Phe Pro Tyr Cys Gly Ala His Glu Ile Asp His Phe Phe
 165 170 175

tgc gag acc ccc gtg ctg gtg cgt ttg gct tgt gct gac act tca gtc 576
 Cys Glu Thr Pro Val Leu Val Arg Leu Ala Cys Ala Asp Thr Ser Val
 180 185 190

ttc gaa aac gcc atg tac atc tgc tgt gtg tta atg ctc ctg gtc ccc 624
 Phe Glu Asn Ala Met Tyr Ile Cys Cys Val Leu Met Leu Leu Val Pro
 195 200 205

ttt tcc ctc atc ctg tcc tcc tat ggt ctc atc ctc gct gct gtt ctg 672
 Phe Ser Leu Ile Leu Ser Ser Tyr Gly Leu Ile Leu Ala Ala Val Leu
 210 215 220

cac atg cgc tct aca gaa gcc cgc aag aag gcc ttt gcc acc tgc tct 720
 His Met Arg Ser Thr Glu Ala Arg Lys Lys Ala Phe Ala Thr Cys Ser
 225 230 235 240

tca cat gtg gct gtg gtg gga ctc ttt tat gga gct gcc att ttt acc 768
 Ser His Val Ala Val Val Gly Leu Phe Tyr Gly Ala Ala Ile Phe Thr
 245 250 255

tat atg aga ccc aaa tcc cac agg tcc act aac cac gac aag gtt gtg 816
 Tyr Met Arg Pro Lys Ser His Arg Ser Thr Asn His Asp Lys Val Val
 260 265 270

tca gcc ttc tat act atg ttc acc cct tta cta aac ccc ctc atc tac 864
 Ser Ala Phe Tyr Thr Met Phe Thr Pro Leu Leu Asn Pro Leu Ile Tyr
 275 280 285

agt gtg 870
 Ser

<210> 312
 <211> 289
 <212> PRT
 <213> Homo Sapiens

<400> 312

Met Glu Asn Gly Ser Tyr Thr Ser Tyr Phe Ile Leu Leu Gly Leu Phe
 1 5 10 15

Asn His Thr Arg Ala His Gln Val Leu Phe Met Met Val Leu Ser Ile
 20 25 30

Val Leu Thr Ser Leu Phe Gly Asn Ser Leu Met Ile Leu Leu Ile His

		35				40						45					
Trp	Asp	His	Arg	Phe	His	Thr	Pro	Met	Tyr	Phe	Leu	Leu	Ser	Gln	Leu		
	50					55					60						
Ser	Leu	Met	Asp	Val	Met	Leu	Val	Ser	Thr	Thr	Val	Pro	Lys	Met	Ala		
65					70					75					80		
Ala	Asp	Tyr	Leu	Thr	Gly	Ser	Lys	Ala	Ile	Ser	Arg	Ala	Gly	Cys	Gly		
				85					90					95			
Ala	Gln	Ile	Phe	Phe	Leu	Pro	Thr	Leu	Gly	Gly	Gly	Glu	Cys	Phe	Leu		
			100					105					110				
Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Ala	Ala	Val	Cys	His	Pro	Leu		
		115					120					125					
Arg	Tyr	Pro	Thr	Leu	Met	Ser	Trp	Gln	Leu	Cys	Leu	Arg	Met	Asn	Leu		
	130					135					140						
Ser	Cys	Trp	Leu	Leu	Gly	Ala	Ala	Asp	Gly	Leu	Leu	Gln	Ala	Val	Ala		
145					150					155					160		
Thr	Leu	Ser	Phe	Pro	Tyr	Cys	Gly	Ala	His	Glu	Ile	Asp	His	Phe	Phe		
				165					170					175			
Cys	Glu	Thr	Pro	Val	Leu	Val	Arg	Leu	Ala	Cys	Ala	Asp	Thr	Ser	Val		
			180					185					190				
Phe	Glu	Asn	Ala	Met	Tyr	Ile	Cys	Cys	Val	Leu	Met	Leu	Leu	Val	Pro		
		195					200					205					
Phe	Ser	Leu	Ile	Leu	Ser	Ser	Tyr	Gly	Leu	Ile	Leu	Ala	Ala	Val	Leu		
	210					215					220						
His	Met	Arg	Ser	Thr	Glu	Ala	Arg	Lys	Lys	Ala	Phe	Ala	Thr	Cys	Ser		
225					230					235					240		
Ser	His	Val	Ala	Val	Val	Gly	Leu	Phe	Tyr	Gly	Ala	Ala	Ile	Phe	Thr		
				245					250					255			
Tyr	Met	Arg	Pro	Lys	Ser	His	Arg	Ser	Thr	Asn	His	Asp	Lys	Val	Val		
			260					265					270				
Ser	Ala	Phe	Tyr	Thr	Met	Phe	Thr	Pro	Leu	Leu	Asn	Pro	Leu	Ile	Tyr		
		275					280					285					

Ser

<210> 313
 <211> 957
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(954)
 <223>

<400> 313
 atg gaa tgg gaa aac cac acc att ctg gtg gaa ttt ttt ctg aag gga 48
 Met Glu Trp Glu Asn His Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
 1 5 10 15
 ctt tct ggt cac cca aga ctt gag tta ctc ttt ttt gtg ctc atc ttc 96
 Leu Ser Gly His Pro Arg Leu Glu Leu Leu Phe Phe Val Leu Ile Phe
 20 25 30
 ata atg tat gtg gtc atc ctt ctg ggg aat ggt act ctc att tta atc 144
 Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
 35 40 45
 agc atc ttg gac cct cac ctt cac acc cct atg tac ttc ttt ctg ggg 192
 Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 aac ctc tcc ttc ttg gac atc tgc tac acc acc acc tct att ccc tcc 240
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser
 65 70 75 80
 acg cta gtg agc ttc ctt tca gaa aga aag acc att tcc ctt tct ggc 288
 Thr Leu Val Ser Phe Leu Ser Glu Arg Lys Thr Ile Ser Leu Ser Gly
 85 90 95
 tgt gca gtg cag atg ttc ctc ggc ttg gcc atg ggg aca aca gag tgt 336
 Cys Ala Val Gln Met Phe Leu Gly Leu Ala Met Gly Thr Thr Glu Cys
 100 105 110
 gtg ctt ctg ggc atg atg gcc ttt gac cgc tat gtg gct atc tgc aac 384
 Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 cct ctg aga tat ccc atc atc atg agt aag gat gcc tat gta ccc atg 432
 Pro Leu Arg Tyr Pro Ile Ile Met Ser Lys Asp Ala Tyr Val Pro Met
 130 135 140
 gca gct ggg tcc tgg atc ata gga gct gtc aat tct gca gta caa tca 480
 Ala Ala Gly Ser Trp Ile Ile Gly Ala Val Asn Ser Ala Val Gln Ser
 145 150 155 160
 gtg ttt gtg gta caa ttg cct ttc tgc agg aat aac atc atc aat cat 528
 Val Phe Val Val Gln Leu Pro Phe Cys Arg Asn Asn Ile Ile Asn His
 165 170 175

ttc acc tgt gaa att ctg gct gtc atg aaa ctg gcc tgt gct gac atc 576
 Phe Thr Cys Glu Ile Leu Ala Val Met Lys Leu Ala Cys Ala Asp Ile
 180 185 190
 tca gac aat gag ttc atc atg ctt gtg gcc aca aca ttg ttc ata ttg 624
 Ser Asp Asn Glu Phe Ile Met Leu Val Ala Thr Thr Leu Phe Ile Leu
 195 200 205
 aca cct ttg tta tta atc att gtc tct tac acg tta atc att gtg agc 672
 Thr Pro Leu Leu Leu Ile Ile Val Ser Tyr Thr Leu Ile Ile Val Ser
 210 215 220
 atc ttc aaa att agc tct tcc gag ggg aga agc aaa gct tcc tct acc 720
 Ile Phe Lys Ile Ser Ser Ser Glu Gly Arg Ser Lys Ala Ser Ser Thr
 225 230 235 240
 tgt tca gcc cat ctg act gtg gtc ata ata ttc tat ggg acc atc ctc 768
 Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu
 245 250 255
 ttc atg tac atg aag ccc aag tct aaa gag aca ctt aat tcg gat gac 816
 Phe Met Tyr Met Lys Pro Lys Ser Lys Glu Thr Leu Asn Ser Asp Asp
 260 265 270
 ttg gat gct acc gac aaa att ata tcc atg ttc tat ggg gtg atg act 864
 Leu Asp Ala Thr Asp Lys Ile Ile Ser Met Phe Tyr Gly Val Met Thr
 275 280 285
 ccc atg atg aat cct tta atc tac agt ctt aga aac aag gat gtg aaa 912
 Pro Met Met Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300
 gag gca gta aaa cac cta ctg aac aga agg ttc ttt agc aag tga 957
 Glu Ala Val Lys His Leu Leu Asn Arg Arg Phe Phe Ser Lys
 305 310 315

<210> 314
 <211> 318
 <212> PRT
 <213> Homo Sapiens

<400> 314

Met Glu Trp Glu Asn His Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
1 5 10 15

Leu Ser Gly His Pro Arg Leu Glu Leu Leu Phe Phe Val Leu Ile Phe
20 25 30

Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
35 40 45

Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
50 55 60

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser
65 70 75 80

Thr Leu Val Ser Phe Leu Ser Glu Arg Lys Thr Ile Ser Leu Ser Gly
85 90 95

Cys Ala Val Gln Met Phe Leu Gly Leu Ala Met Gly Thr Thr Glu Cys
100 105 110

Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Arg Tyr Pro Ile Ile Met Ser Lys Asp Ala Tyr Val Pro Met
130 135 140

Ala Ala Gly Ser Trp Ile Ile Gly Ala Val Asn Ser Ala Val Gln Ser
145 150 155 160

Val Phe Val Val Gln Leu Pro Phe Cys Arg Asn Asn Ile Ile Asn His
165 170 175

Phe Thr Cys Glu Ile Leu Ala Val Met Lys Leu Ala Cys Ala Asp Ile
180 185 190

Ser Asp Asn Glu Phe Ile Met Leu Val Ala Thr Thr Leu Phe Ile Leu
195 200 205

Thr Pro Leu Leu Leu Ile Ile Val Ser Tyr Thr Leu Ile Ile Val Ser
210 215 220

Ile Phe Lys Ile Ser Ser Ser Glu Gly Arg Ser Lys Ala Ser Ser Thr
225 230 235 240

Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu
245 250 255

Phe Met Tyr Met Lys Pro Lys Ser Lys Glu Thr Leu Asn Ser Asp Asp
260 265 270

Leu Asp Ala Thr Asp Lys Ile Ile Ser Met Phe Tyr Gly Val Met Thr
275 280 285

Pro Met Met Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
290 295 300

Glu Ala Val Lys His Leu Leu Asn Arg Arg Phe Phe Ser Lys

305

310

315

<210> 315
 <211> 954
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(951)
 <223>

<400> 315
 atg ggt gag att aac cag aca ctt gtg tca gaa ttt ctt ctt ctg ggt 48
 Met Gly Glu Ile Asn Gln Thr Leu Val Ser Glu Phe Leu Leu Leu Gly
 1 5 10 15
 ctt tct gga tac cca aag att gag att gtt tac ttt gct ctc att cta 96
 Leu Ser Gly Tyr Pro Lys Ile Glu Ile Val Tyr Phe Ala Leu Ile Leu
 20 25 30
 gtt atg tac cta gtg att cta att ggc aat ggt gtt cta atc ata gcc 144
 Val Met Tyr Leu Val Ile Leu Ile Gly Asn Gly Val Leu Ile Ile Ala
 35 40 45
 agc atc ttt gat tct cat ttt cac aca cca atg tac ttc ttc ctg ggc 192
 Ser Ile Phe Asp Ser His Phe His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 aac ctc tct ttc ctg gat atc tgc tat aca tcc tcc tct gtt ccc tca 240
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Ser Ser Ser Val Pro Ser
 65 70 75 80
 aca ttg gtg agc tta atc tca aag aaa aga aac att tcc ttc tct gga 288
 Thr Leu Val Ser Leu Ile Ser Lys Lys Arg Asn Ile Ser Phe Ser Gly
 85 90 95
 tgt gca gtg cag atg ttc ttt ggg ttt gca atg ggg tca aca gaa tgt 336
 Cys Ala Val Gln Met Phe Phe Gly Phe Ala Met Gly Ser Thr Glu Cys
 100 105 110
 ctg ctt ctt ggc atg atg gca ttt gat cgt tat gtg gcc atc tgc aac 384
 Leu Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 cca ctg aga tac ccc atc atc ctg agc aag gtg gcg tat gta ttg atg 432
 Pro Leu Arg Tyr Pro Ile Ile Leu Ser Lys Val Ala Tyr Val Leu Met
 130 135 140
 gct tct gtg tcc tgg ctg tcc ggt gga ata aat tca gct gtg caa aca 480
 Ala Ser Val Ser Trp Leu Ser Gly Gly Ile Asn Ser Ala Val Gln Thr
 145 150 155 160
 tta ctt gcc atg aga ctg cct ttc tgt ggg aat aat att atc aat cat 528
 Leu Leu Ala Met Arg Leu Pro Phe Cys Gly Asn Asn Ile Ile Asn His
 165 170 175
 ttc gca tgt gaa ata tta gct gtc ctc aag ctg gcc tgt gct gat ata 576
 Phe Ala Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile

180	185	190	
tcc ctc aat att atc acc atg gtg	ata tca aat atg gcc ttc ctg gtt		624
Ser Leu Asn Ile Ile Thr Met Val	Ile Ser Asn Met Ala Phe Leu Val		
195	200	205	
ctt cca ctg atg gtc att ttt ttc tcc tat atg ttc atc ctc tac acc			672
Leu Pro Leu Met Val Ile Phe Phe Ser Tyr Met Phe Ile Leu Tyr Thr			
210	215	220	
atc ttg caa atg aat tca gcc aca gga aga cgc aag gca ttt tcc acg			720
Ile Leu Gln Met Asn Ser Ala Thr Gly Arg Arg Lys Ala Phe Ser Thr			
225	230	235	240
tgc tca gct cac ctg act gtg gtg atc ata ttt tac ggt acc atc ttc			768
Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Phe			
245	250	255	
ttt atg tat gcg aaa ccg aag tct caa gac ctg att ggg gaa gaa aaa			816
Phe Met Tyr Ala Lys Pro Lys Ser Gln Asp Leu Ile Gly Glu Glu Lys			
260	265	270	
ttg caa gca tta gac aag ctc att tct ctg ttt tat ggg gta gtg aca			864
Leu Gln Ala Leu Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val Thr			
275	280	285	
ccc atg ctg aat cct ata ctc tat agc ttg aga aat aag gat gta aaa			912
Pro Met Leu Asn Pro Ile Leu Tyr Ser Leu Arg Asn Lys Asp Val Lys			
290	295	300	
gct gct gta aaa tat ttg ctg aac aaa aaa cca att cac taa			954
Ala Ala Val Lys Tyr Leu Leu Asn Lys Lys Pro Ile His			
305	310	315	

<210> 316

<211> 317

<212> PRT

<213> Homo Sapiens

<400> 316

Met Gly Glu Ile Asn Gln Thr Leu Val Ser Glu Phe Leu Leu Leu Gly
1 5 10 15

Leu Ser Gly Tyr Pro Lys Ile Glu Ile Val Tyr Phe Ala Leu Ile Leu
20 25 30

Val Met Tyr Leu Val Ile Leu Ile Gly Asn Gly Val Leu Ile Ile Ala
35 40 45

Ser Ile Phe Asp Ser His Phe His Thr Pro Met Tyr Phe Phe Leu Gly
50 55 60

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Ser Ser Ser Val Pro Ser
65 70 75 80

Thr Leu Val Ser Leu Ile Ser Lys Lys Arg Asn Ile Ser Phe Ser Gly
 85 90 95

Cys Ala Val Gln Met Phe Phe Gly Phe Ala Met Gly Ser Thr Glu Cys
 100 105 110

Leu Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Pro Ile Ile Leu Ser Lys Val Ala Tyr Val Leu Met
 130 135 140

Ala Ser Val Ser Trp Leu Ser Gly Gly Ile Asn Ser Ala Val Gln Thr
 145 150 155 160

Leu Leu Ala Met Arg Leu Pro Phe Cys Gly Asn Asn Ile Ile Asn His
 165 170 175

Phe Ala Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile
 180 185 190

Ser Leu Asn Ile Ile Thr Met Val Ile Ser Asn Met Ala Phe Leu Val
 195 200 205

Leu Pro Leu Met Val Ile Phe Phe Ser Tyr Met Phe Ile Leu Tyr Thr
 210 215 220

Ile Leu Gln Met Asn Ser Ala Thr Gly Arg Arg Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Phe
 245 250 255

Phe Met Tyr Ala Lys Pro Lys Ser Gln Asp Leu Ile Gly Glu Glu Lys
 260 265 270

Leu Gln Ala Leu Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val Thr
 275 280 285

Pro Met Leu Asn Pro Ile Leu Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Ala Ala Val Lys Tyr Leu Leu Asn Lys Lys Pro Ile His
 305 310 315

<210> 317
 <211> 957
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS
 <222> (1)..(954)
 <223>

<400> 317
 atg gaa tgg gaa aac cac acc att ctg gtg gaa ttt ttt ctg aag gga 48
 Met Glu Trp Glu Asn His Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
 1 5 10 15
 ctt tct ggt cac cca aga ctt gag tta ctc ttt ttt gtg ctc atc ttc 96
 Leu Ser Gly His Pro Arg Leu Glu Leu Leu Phe Phe Val Leu Ile Phe
 20 25 30
 ata atg tat gtg gtc atc ctt ctg ggg aat ggt act ctc att tta atc 144
 Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
 35 40 45
 agc atc ttg gac cct cac ctt cac acc cct atg tac ttc ttt ctg ggg 192
 Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 aac ctc tcc ttc ttg gac atc tgc tac acc acc acc tct att ccc tcc 240
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser
 65 70 75 80
 acg cta gtg agc ttc ctt tca gaa aga aag acc att tcc ctt tct ggc 288
 Thr Leu Val Ser Phe Leu Ser Glu Arg Lys Thr Ile Ser Leu Ser Gly
 85 90 95
 tgt gca gtg cag atg ttc ctc agc ttg gcc atg ggg aca aca gag tgt 336
 Cys Ala Val Gln Met Phe Leu Ser Leu Ala Met Gly Thr Thr Glu Cys
 100 105 110
 gtg ctt ctg ggc gtg atg gcc ttt gac cgc tat gtg gct atc tgc aac 384
 Val Leu Leu Gly Val Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 cct ctg aga tat ccc atc atc atg agt aag gat gcc tat gta ccc atg 432
 Pro Leu Arg Tyr Pro Ile Ile Met Ser Lys Asp Ala Tyr Val Pro Met
 130 135 140
 gca gct ggg tcc tgg atc ata gga gct gtc aat tct gca gta caa aca 480
 Ala Ala Gly Ser Trp Ile Ile Gly Ala Val Asn Ser Ala Val Gln Thr
 145 150 155 160
 gtg ttt gtg gta caa ttg cct ttc tgc agg aat aac atc atc aat cat 528
 Val Phe Val Val Gln Leu Pro Phe Cys Arg Asn Asn Ile Ile Asn His
 165 170 175
 ttc acc tgt gaa att cta gct gtc atg aaa ctg gcc tgt gct gac atc 576
 Phe Thr Cys Glu Ile Leu Ala Val Met Lys Leu Ala Cys Ala Asp Ile
 180 185 190
 tca ggc aat gag ttc atc ctg ctt gtg acc aca aca ttg ttc cta ttg 624

Ser Gly Asn Glu Phe Ile Leu Leu Val Thr Thr Thr Leu Phe Leu Leu
 195 200 205

aca cct ttg tta tta att att gtc tct tac acg tta atc att ttg agc 672
 Thr Pro Leu Leu Leu Ile Ile Val Ser Tyr Thr Leu Ile Ile Leu Ser
 210 215 220

atc ttc aaa att agc tct tcg gag ggg aga agc aaa cct tcc tct acc 720
 Ile Phe Lys Ile Ser Ser Ser Glu Gly Arg Ser Lys Pro Ser Ser Thr
 225 230 235 240

tgc tca gct cgt ctg act gtg gtg ata aca ttc tgt ggg acc atc ttc 768
 Cys Ser Ala Arg Leu Thr Val Val Ile Thr Phe Cys Gly Thr Ile Phe
 245 250 255

ctc atg tac atg aag ccc aag tct caa gag aca ctt aat tca gat gac 816
 Leu Met Tyr Met Lys Pro Lys Ser Gln Glu Thr Leu Asn Ser Asp Asp
 260 265 270

ttg gat gcc act gac aaa ctt ata ttc ata ttc tac agg gtg atg act 864
 Leu Asp Ala Thr Asp Lys Leu Ile Phe Ile Phe Tyr Arg Val Met Thr
 275 280 285

ccc atg atg aat cct tta atc tac agt ctt aga aac aag gat gtg aag 912
 Pro Met Met Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

gag gca gta aaa cac cta ctg aga aga aaa aat ttt aac aag taa 957
 Glu Ala Val Lys His Leu Leu Arg Arg Lys Asn Phe Asn Lys
 305 310 315

<210> 318
 <211> 318
 <212> PRT
 <213> Homo Sapiens

<400> 318

Met Glu Trp Glu Asn His Thr Ile Leu Val Glu Phe Phe Leu Lys Gly
 1 5 10 15

Leu Ser Gly His Pro Arg Leu Glu Leu Leu Phe Phe Val Leu Ile Phe
 20 25 30

Ile Met Tyr Val Val Ile Leu Leu Gly Asn Gly Thr Leu Ile Leu Ile
 35 40 45

Ser Ile Leu Asp Pro His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Thr Ser Ile Pro Ser
 65 70 75 80

Thr Leu Val Ser Phe Leu Ser Glu Arg Lys Thr Ile Ser Leu Ser Gly
 85 90 95

Cys Ala Val Gln Met Phe Leu Ser Leu Ala Met Gly Thr Thr Glu Cys
 100 105 110

Val Leu Leu Gly Val Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Pro Ile Ile Met Ser Lys Asp Ala Tyr Val Pro Met
 130 135 140

Ala Ala Gly Ser Trp Ile Ile Gly Ala Val Asn Ser Ala Val Gln Thr
 145 150 155 160

Val Phe Val Val Gln Leu Pro Phe Cys Arg Asn Asn Ile Ile Asn His
 165 170 175

Phe Thr Cys Glu Ile Leu Ala Val Met Lys Leu Ala Cys Ala Asp Ile
 180 185 190

Ser Gly Asn Glu Phe Ile Leu Leu Val Thr Thr Thr Leu Phe Leu Leu
 195 200 205

Thr Pro Leu Leu Leu Ile Ile Val Ser Tyr Thr Leu Ile Ile Leu Ser
 210 215 220

Ile Phe Lys Ile Ser Ser Ser Glu Gly Arg Ser Lys Pro Ser Ser Thr
 225 230 235 240

Cys Ser Ala Arg Leu Thr Val Val Ile Thr Phe Cys Gly Thr Ile Phe
 245 250 255

Leu Met Tyr Met Lys Pro Lys Ser Gln Glu Thr Leu Asn Ser Asp Asp
 260 265 270

Leu Asp Ala Thr Asp Lys Leu Ile Phe Ile Phe Tyr Arg Val Met Thr
 275 280 285

Pro Met Met Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Glu Ala Val Lys His Leu Leu Arg Arg Lys Asn Phe Asn Lys
 305 310 315

<210> 319

<211> 963

<212> DNA

<213> Homo Sapiens

<220>

<221> CDS

<222> (1) .. (960)

<223>

<400> 319

atg	gaa	agg	acc	aac	gat	tcc	acg	tcg	aca	gaa	ttt	ttc	ctg	gta	ggg	48
Met	Glu	Arg	Thr	Asn	Asp	Ser	Thr	Ser	Thr	Glu	Phe	Phe	Leu	Val	Gly	
1				5					10					15		

ctt	tct	gcc	cac	cca	aag	ctc	cag	aca	ggt	ttc	ttc	ggt	cta	att	ttg	96
Leu	Ser	Ala	His	Pro	Lys	Leu	Gln	Thr	Val	Phe	Phe	Val	Leu	Ile	Leu	
			20					25					30			

tgg	atg	tac	ctg	atg	atc	ctg	ctt	gga	aat	gga	gtc	ctt	atc	tca	gtt	144
Trp	Met	Tyr	Leu	Met	Ile	Leu	Leu	Gly	Asn	Gly	Val	Leu	Ile	Ser	Val	
		35				40					45					

atc	atc	ttt	gat	tct	cac	ctg	cac	acc	ccc	atg	tat	ttc	ttc	ctc	tgt	192
Ile	Ile	Phe	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Cys	
	50					55					60					

aat	ctt	tcc	ttc	ctc	gac	ggt	tgc	tac	aca	agt	tcc	tct	gtc	cca	cta	240
Asn	Leu	Ser	Phe	Leu	Asp	Val	Cys	Tyr	Thr	Ser	Ser	Ser	Val	Pro	Leu	
65					70					75					80	

att	ctt	gcc	agc	ttt	ctg	gca	gta	aag	aaa	aag	ggt	tcc	ttc	tct	ggg	288
Ile	Leu	Ala	Ser	Phe	Leu	Ala	Val	Lys	Lys	Lys	Val	Ser	Phe	Ser	Gly	
				85				90						95		

tgt	atg	gtg	caa	atg	ttt	att	tct	ttt	gcc	atg	ggg	gcc	acg	gag	tgc	336
Cys	Met	Val	Gln	Met	Phe	Ile	Ser	Phe	Ala	Met	Gly	Ala	Thr	Glu	Cys	
			100					105					110			

atg	atc	tta	ggc	acg	atg	gca	ctg	gac	cgc	tat	gtg	gcc	atc	tgc	tac	384
Met	Ile	Leu	Gly	Thr	Met	Ala	Leu	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Tyr	
		115					120					125				

cca	ctg	aga	tac	cct	gtc	atc	atg	agc	aag	ggt	gcc	tat	gtg	gcc	atg	432
Pro	Leu	Arg	Tyr	Pro	Val	Ile	Met	Ser	Lys	Gly	Ala	Tyr	Val	Ala	Met	
	130					135					140					

gca	gct	ggg	tcc	tgg	gtc	act	ggg	ctt	gtg	gac	tca	gta	gtg	cag	aca	480
Ala	Ala	Gly	Ser	Trp	Val	Thr	Gly	Leu	Val	Asp	Ser	Val	Val	Gln	Thr	
145					150					155					160	

gct	ttt	gca	atg	cag	tta	cca	ttc	tgt	gct	aat	aat	gtc	att	aaa	cat	528
Ala	Phe	Ala	Met	Gln	Leu	Pro	Phe	Cys	Ala	Asn	Asn	Val	Ile	Lys	His	
				165					170					175		

ttt	gtc	tgt	gaa	att	ctg	gct	atc	ttg	aaa	ctg	gcc	tgt	gct	gat	att	576
Phe	Val	Cys	Glu	Ile	Leu	Ala	Ile	Leu	Lys	Leu	Ala	Cys	Ala	Asp	Ile	
			180					185					190			

tca	atc	aat	gtg	att	agt	atg	aca	ggg	tcg	aat	ctg	att	gtt	ctg	gtt	624
Ser	Ile	Asn	Val	Ile	Ser	Met	Thr	Gly	Ser	Asn	Leu	Ile	Val	Leu	Val	
		195					200									

att cca ttg tta gta att tcc atc tct tac ata ttt att gtt gcc act 672
 Ile Pro Leu Leu Val Ile Ser Ile Ser Tyr Ile Phe Ile Val Ala Thr
 210 215 220
 att ctg agg att cct tcc act gaa gga aaa cat aag gcc ttc tcc acc 720
 Ile Leu Arg Ile Pro Ser Thr Glu Gly Lys His Lys Ala Phe Ser Thr
 225 230 235 240
 tgc tca gcc cac ctg aca gtg gtg att ata ttc tat gga acc atc ttc 768
 Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Phe
 245 250 255
 ttc atg tac gca aag cct gag tct aaa gcc tct gtt gat tca ggt aat 816
 Phe Met Tyr Ala Lys Pro Glu Ser Lys Ala Ser Val Asp Ser Gly Asn
 260 265 270
 gaa gac atc att gag gcc ctc atc tcc ctt ttc tat gga gtg atg act 864
 Glu Asp Ile Ile Glu Ala Leu Ile Ser Leu Phe Tyr Gly Val Met Thr
 275 280 285
 ccc atg ctt aat cct ctc atc tat agt ctg cga aac aag gat gta aag 912
 Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300
 gct gct gtc aaa aac ata ctg tgt agg aaa aac ttt tct gat gga aaa 960
 Ala Ala Val Lys Asn Ile Leu Cys Arg Lys Asn Phe Ser Asp Gly Lys
 305 310 315 320
 tga 963

<210> 320
 <211> 320
 <212> PRT
 <213> Homo Sapiens

<400> 320

Met Glu Arg Thr Asn Asp Ser Thr Ser Thr Glu Phe Phe Leu Val Gly
 1 5 10 15

Leu Ser Ala His Pro Lys Leu Gln Thr Val Phe Phe Val Leu Ile Leu
 20 25 30

Trp Met Tyr Leu Met Ile Leu Leu Gly Asn Gly Val Leu Ile Ser Val
 35 40 45

Ile Ile Phe Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Cys
 50 55 60

Asn Leu Ser Phe Leu Asp Val Cys Tyr Thr Ser Ser Ser Val Pro Leu
 65 70 75 80

Ile Leu Ala Ser Phe Leu Ala Val Lys Lys Lys Val Ser Phe Ser Gly
 85 90 95

Cys Met Val Gln Met Phe Ile Ser Phe Ala Met Gly Ala Thr Glu Cys
 100 105 110

Met Ile Leu Gly Thr Met Ala Leu Asp Arg Tyr Val Ala Ile Cys Tyr
 115 120 125

Pro Leu Arg Tyr Pro Val Ile Met Ser Lys Gly Ala Tyr Val Ala Met
 130 135 140

Ala Ala Gly Ser Trp Val Thr Gly Leu Val Asp Ser Val Val Gln Thr
 145 150 155 160

Ala Phe Ala Met Gln Leu Pro Phe Cys Ala Asn Asn Val Ile Lys His
 165 170 175

Phe Val Cys Glu Ile Leu Ala Ile Leu Lys Leu Ala Cys Ala Asp Ile
 180 185 190

Ser Ile Asn Val Ile Ser Met Thr Gly Ser Asn Leu Ile Val Leu Val
 195 200 205

Ile Pro Leu Leu Val Ile Ser Ile Ser Tyr Ile Phe Ile Val Ala Thr
 210 215 220

Ile Leu Arg Ile Pro Ser Thr Glu Gly Lys His Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Phe
 245 250 255

Phe Met Tyr Ala Lys Pro Glu Ser Lys Ala Ser Val Asp Ser Gly Asn
 260 265 270

Glu Asp Ile Ile Glu Ala Leu Ile Ser Leu Phe Tyr Gly Val Met Thr
 275 280 285

Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Ala Ala Val Lys Asn Ile Leu Cys Arg Lys Asn Phe Ser Asp Gly Lys
 305 310 315 320

<210> 321

<211> 960

<212> DNA

<213> Homo Sapiens

<220>

<221> CDS

<222> (1)..(957)

<223>

<400> 321

atg ttc ccg gca aat tgg aca tct gta aaa gta ttt ttc ttc ctg gga	48
Met Phe Pro Ala Asn Trp Thr Ser Val Lys Val Phe Phe Phe Leu Gly	
1 5 10 15	
ttt ttt cac tac ccc aaa gtt cag gtc atc ata ttt gcg gtg tgc ttg	96
Phe Phe His Tyr Pro Lys Val Gln Val Ile Ile Phe Ala Val Cys Leu	
20 25 30	
ctg atg tac ctg atc acc ttg ctg ggc aac att ttt ctg atc tcc atc	144
Leu Met Tyr Leu Ile Thr Leu Leu Gly Asn Ile Phe Leu Ile Ser Ile	
35 40 45	
acc att cta gat tcc cac ctg cac acc cct atg tac ctc ttc ctc agc	192
Thr Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Leu Phe Leu Ser	
50 55 60	
aat ctc tcc ttt ctg gac atc tgg tac tcc tct tct gcc ctc tct cca	240
Asn Leu Ser Phe Leu Asp Ile Trp Tyr Ser Ser Ser Ala Leu Ser Pro	
65 70 75 80	
atg ctg gca aac ttt gtt tca ggg aga aac act att tca ttc tca ggg	288
Met Leu Ala Asn Phe Val Ser Gly Arg Asn Thr Ile Ser Phe Ser Gly	
85 90 95	
tgc gcc act cag atg tac ctc tcc ctt gcc atg ggc tcc act gag tgt	336
Cys Ala Thr Gln Met Tyr Leu Ser Leu Ala Met Gly Ser Thr Glu Cys	
100 105 110	
gtg ctc ctg ccc atg atg gca tat gac cgg tat gtg gcc atc tgc aac	384
Val Leu Leu Pro Met Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn	
115 120 125	
ccc ctg aga tac cct gtc atc atg aat agg aga acc tgt gtg cag att	432
Pro Leu Arg Tyr Pro Val Ile Met Asn Arg Arg Thr Cys Val Gln Ile	
130 135 140	
gca gct ggc tcc tgg atg aca ggc tgt ctc act gcc atg gtg gaa atg	480
Ala Ala Gly Ser Trp Met Thr Gly Cys Leu Thr Ala Met Val Glu Met	
145 150 155 160	
atg tct gtg ctg cca ctg tct ctc tgt ggt aat agc atc atc aat cat	528
Met Ser Val Leu Pro Leu Ser Leu Cys Gly Asn Ser Ile Ile Asn His	
165 170 175	
ttc act tgt gaa att ctg gcc atc ttg aaa ttg gtt tgt gtg gac acc	576
Phe Thr Cys Glu Ile Leu Ala Ile Leu Lys Leu Val Cys Val Asp Thr	
180 185 190	
tcc ctg gtg cag tta atc atg ctg gtg atc agt gta ctt ctt ctc ccc	624
Ser Leu Val Gln Leu Ile Met Leu Val Ile Ser Val Leu Leu Leu Pro	
195 200 205	
atg cca atg cta ctc att tgt atc tct tat gca ttt atc ctc gcc agt	672

Met Pro Met Leu Leu Ile Cys Ile Ser Tyr Ala Phe Ile Leu Ala Ser
 210 215 220

atc ctg aga atc agc tca gtg gaa ggt cga agt aaa gcc ttt tca acg 720
 Ile Leu Arg Ile Ser Ser Val Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240

tgc aca gcc cac ctg atg gtg gta gtt ttg ttc tat ggg acg gct ctc 768
 Cys Thr Ala His Leu Met Val Val Val Leu Phe Tyr Gly Thr Ala Leu
 245 250 255

tcc atg cac ctg aag ccc tcc gct gta gat tca cag gaa ata gac aaa 816
 Ser Met His Leu Lys Pro Ser Ala Val Asp Ser Gln Glu Ile Asp Lys
 260 265 270

ttt atg gct ttg gtg tat gcc gga caa acc ccc atg ttg aat cct atc 864
 Phe Met Ala Leu Val Tyr Ala Gly Gln Thr Pro Met Leu Asn Pro Ile
 275 280 285

atc tat agt cta cgg aac aaa gag gtg aaa gtg gcc ttg aaa aaa ttg 912
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Val Ala Leu Lys Lys Leu
 290 295 300

ctg att aga aat cat ttt aat act gcc ttc att tcc atc ctc aaa taa 960
 Leu Ile Arg Asn His Phe Asn Thr Ala Phe Ile Ser Ile Leu Lys
 305 310 315

<210> 322
 <211> 319
 <212> PRT
 <213> Homo Sapiens

<400> 322

Met Phe Pro Ala Asn Trp Thr Ser Val Lys Val Phe Phe Phe Leu Gly
 1 5 10 15

Phe Phe His Tyr Pro Lys Val Gln Val Ile Ile Phe Ala Val Cys Leu
 20 25 30

Leu Met Tyr Leu Ile Thr Leu Leu Gly Asn Ile Phe Leu Ile Ser Ile
 35 40 45

Thr Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Leu Phe Leu Ser
 50 55 60

Asn Leu Ser Phe Leu Asp Ile Trp Tyr Ser Ser Ser Ala Leu Ser Pro
 65 70 75 80

Met Leu Ala Asn Phe Val Ser Gly Arg Asn Thr Ile Ser Phe Ser Gly
 85 90 95

Cys Ala Thr Gln Met Tyr Leu Ser Leu Ala Met Gly Ser Thr Glu Cys
 100 105 110

Val Leu Leu Pro Met Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Pro Val Ile Met Asn Arg Arg Thr Cys Val Gln Ile
 130 135 140

Ala Ala Gly Ser Trp Met Thr Gly Cys Leu Thr Ala Met Val Glu Met
 145 150 155 160

Met Ser Val Leu Pro Leu Ser Leu Cys Gly Asn Ser Ile Ile Asn His
 165 170 175

Phe Thr Cys Glu Ile Leu Ala Ile Leu Lys Leu Val Cys Val Asp Thr
 180 185 190

Ser Leu Val Gln Leu Ile Met Leu Val Ile Ser Val Leu Leu Leu Pro
 195 200 205

Met Pro Met Leu Leu Ile Cys Ile Ser Tyr Ala Phe Ile Leu Ala Ser
 210 215 220

Ile Leu Arg Ile Ser Ser Val Glu Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240

Cys Thr Ala His Leu Met Val Val Val Leu Phe Tyr Gly Thr Ala Leu
 245 250 255

Ser Met His Leu Lys Pro Ser Ala Val Asp Ser Gln Glu Ile Asp Lys
 260 265 270

Phe Met Ala Leu Val Tyr Ala Gly Gln Thr Pro Met Leu Asn Pro Ile
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Val Ala Leu Lys Lys Leu
 290 295 300

Leu Ile Arg Asn His Phe Asn Thr Ala Phe Ile Ser Ile Leu Lys
 305 310 315

<210> 323
 <211> 933
 <212> DNA
 <213> Homo Sapiens

<220>
 <221> CDS

<222> (1)..(930)

<223>

<400> 323

aat tac aat caa tca tca act gat ttc atc tta tta gga ttc ttc cca	48
Asn Tyr Asn Gln Ser Ser Thr Asp Phe Ile Leu Leu Gly Phe Phe Pro	
1 5 10 15	
cca tca aga att ggc ctt ttc ctc ttc atc ctc att gtt ttc att ttc	96
Pro Ser Arg Ile Gly Leu Phe Leu Phe Ile Leu Ile Val Phe Ile Phe	
20 25 30	
cta atg gct cta att gga aac cta tcc atg att ctt ctc atc ttc ttg	144
Leu Met Ala Leu Ile Gly Asn Leu Ser Met Ile Leu Leu Ile Phe Leu	
35 40 45	
gac acc cat ctc cac aca ccc atg tat ttc cta ctt agt cag ctc tcc	192
Asp Thr His Leu His Thr Pro Met Tyr Phe Leu Leu Ser Gln Leu Ser	
50 55 60	
ctc att gac cta aat tac atc tcc acc att gtt cct aag atg gca tct	240
Leu Ile Asp Leu Asn Tyr Ile Ser Thr Ile Val Pro Lys Met Ala Ser	
65 70 75 80	
gat ttt ctg tct ggt aac aag tct atc tcc ttc act ggg tgt ggg att	288
Asp Phe Leu Ser Gly Asn Lys Ser Ile Ser Phe Thr Gly Cys Gly Ile	
85 90 95	
cag agt ttc ttc ttc tcg gca tta gga ggt gca gaa gca cta ctt ttg	336
Gln Ser Phe Phe Phe Ser Ala Leu Gly Gly Ala Glu Ala Leu Leu Leu	
100 105 110	
gca tct atg gcc tat gat cgt tac att gct att tgc ttt cct ctt cac	384
Ala Ser Met Ala Tyr Asp Arg Tyr Ile Ala Ile Cys Phe Pro Leu His	
115 120 125	
tat ccc atc cgc atg agc aaa aga atg tgt gtg ctg atg ata aca ggg	432
Tyr Pro Ile Arg Met Ser Lys Arg Met Cys Val Leu Met Ile Thr Gly	
130 135 140	
tct tgg atc ata ggc tcg atc aat gct tgt gct cac act gta tat gta	480
Ser Trp Ile Ile Gly Ser Ile Asn Ala Cys Ala His Thr Val Tyr Val	
145 150 155 160	
ctc cat att cct tat tgc caa tcc agg gcc atc aat cat ttc ttc tgt	528
Leu His Ile Pro Tyr Cys Gln Ser Arg Ala Ile Asn His Phe Phe Cys	
165 170 175	
gat gtc cca gca atg gtg act ctg gcc tgc atg gac acc tgg gtc tat	576
Asp Val Pro Ala Met Val Thr Leu Ala Cys Met Asp Thr Trp Val Tyr	
180 185 190	
gag ggc aca gtg ttt ttg agc acc acc atc ttt ctc gtg ttt ccc ttc	624
Glu Gly Thr Val Phe Leu Ser Thr Thr Ile Phe Leu Val Phe Pro Phe	
195 200 205	
att gct att tca tgt tcc tat ggc cgg gtt ctc ctt gct gtc tac cac	672
Ile Ala Ile Ser Cys Ser Tyr Gly Arg Val Leu Leu Ala Val Tyr His	
210 215 220	

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atg aaa tct gca gaa ggg agg aag aaa gcc tac ctg acc tgc agc acc      720
Met Lys Ser Ala Glu Gly Arg Lys Lys Ala Tyr Leu Thr Cys Ser Thr
225                      230                      235                      240

cac ctg act gta gta act ttc tac tat gca cct ttt gtc tac act tat      768
His Leu Thr Val Val Thr Phe Tyr Tyr Ala Pro Phe Val Tyr Thr Tyr
                      245                      250                      255

cta cgt cca aga tcc ctg cga tct cca aca gag gac aag gtt ctg gct      816
Leu Arg Pro Arg Ser Leu Arg Ser Pro Thr Glu Asp Lys Val Leu Ala
                      260                      265                      270

gtc ttc tac acc atc ctg acc cca atg ctg aac ccc atc atc tat agc      864
Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser
                      275                      280                      285

ctg agg aac aag gag gtg atg ggg gcc ctg aca cga gtg agt cag aga      912
Leu Arg Asn Lys Glu Val Met Gly Ala Leu Thr Arg Val Ser Gln Arg
                      290                      295                      300

atc tgc tct gtg aaa atg tag      933
Ile Cys Ser Val Lys Met
305                      310

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<210> 324
<211> 310
<212> PRT
<213> Homo Sapiens

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<400> 324

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Asn Tyr Asn Gln Ser Ser Thr Asp Phe Ile Leu Leu Gly Phe Phe Pro
1                      5                      10                      15

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Pro Ser Arg Ile Gly Leu Phe Leu Phe Ile Leu Ile Val Phe Ile Phe
20                      25                      30

```

```

Leu Met Ala Leu Ile Gly Asn Leu Ser Met Ile Leu Leu Ile Phe Leu
35                      40                      45

```

```

Asp Thr His Leu His Thr Pro Met Tyr Phe Leu Leu Ser Gln Leu Ser
50                      55                      60

```

```

Leu Ile Asp Leu Asn Tyr Ile Ser Thr Ile Val Pro Lys Met Ala Ser
65                      70                      75                      80

```

```

Asp Phe Leu Ser Gly Asn Lys Ser Ile Ser Phe Thr Gly Cys Gly Ile
85                      90                      95

```

```

Gln Ser Phe Phe Phe Ser Ala Leu Gly Gly Ala Glu Ala Leu Leu Leu
100                      105                      110

```

```

Ala Ser Met Ala Tyr Asp Arg Tyr Ile Ala Ile Cys Phe Pro Leu His

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115	120	125
Tyr Pro Ile Arg Met Ser Lys Arg Met Cys Val Leu Met Ile Thr Gly		
130	135	140
Ser Trp Ile Ile Gly Ser Ile Asn Ala Cys Ala His Thr Val Tyr Val		
145	150	155
Leu His Ile Pro Tyr Cys Gln Ser Arg Ala Ile Asn His Phe Phe Cys		
165	170	175
Asp Val Pro Ala Met Val Thr Leu Ala Cys Met Asp Thr Trp Val Tyr		
180	185	190
Glu Gly Thr Val Phe Leu Ser Thr Thr Ile Phe Leu Val Phe Pro Phe		
195	200	205
Ile Ala Ile Ser Cys Ser Tyr Gly Arg Val Leu Leu Ala Val Tyr His		
210	215	220
Met Lys Ser Ala Glu Gly Arg Lys Lys Ala Tyr Leu Thr Cys Ser Thr		
225	230	235
His Leu Thr Val Val Thr Phe Tyr Tyr Ala Pro Phe Val Tyr Thr Tyr		
245	250	255
Leu Arg Pro Arg Ser Leu Arg Ser Pro Thr Glu Asp Lys Val Leu Ala		
260	265	270
Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser		
275	280	285
Leu Arg Asn Lys Glu Val Met Gly Ala Leu Thr Arg Val Ser Gln Arg		
290	295	300
Ile Cys Ser Val Lys Met		
305	310	

<210> 325
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 <212> DNA
 <213> Homo Sapiens

<220>
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Met Gly Leu Gly Asn Glu Ser Ser Leu Met Asp Phe Ile Leu Leu Gly																
1	5				10					15						
ttc tca gac cac cct cgt ctg gag gct gtt ctc ttt gta ttt gtc ctt																96
Phe Ser Asp His Pro Arg Leu Glu Ala Val Leu Phe Val Phe Val Leu																
	20				25					30						
ttc ttc tac ctc ctg acc ctt gtg gga aac ttc acc ata atc atc atc																144
Phe Phe Tyr Leu Leu Thr Leu Val Gly Asn Phe Thr Ile Ile Ile Ile																
	35				40					45						
tca tat ctg gat ccc cct ctt cat acc cca atg tac ttt ttt ctc agc																192
Ser Tyr Leu Asp Pro Pro Leu His Thr Pro Met Tyr Phe Phe Leu Ser																
	50				55					60						
aac ctc tct tta ctg gac atc tgc ttc act act agc ctt gct cct cag																240
Asn Leu Ser Leu Leu Asp Ile Cys Phe Thr Thr Ser Leu Ala Pro Gln																
65	70				75					80						
acc tta gtt aac ttg caa aga cca aag aag acg atc act tac ggt ggt																288
Thr Leu Val Asn Leu Gln Arg Pro Lys Lys Thr Ile Thr Tyr Gly Gly																
	85				90					95						
tgt gtg gcg caa ctc tat att tct ctg gca ctg ggc tcc act gaa tgt																336
Cys Val Ala Gln Leu Tyr Ile Ser Leu Ala Leu Gly Ser Thr Glu Cys																
	100				105					110						
atc ctc ttg gct gac atg gcc ttg gat cgg tac att gct gtc tgc aaa																384
Ile Leu Leu Ala Asp Met Ala Leu Asp Arg Tyr Ile Ala Val Cys Lys																
	115				120					125						
ccc ctc cac tat gta gtc atc atg aac cca cgg ctt tgc caa cag ctg																432
Pro Leu His Tyr Val Val Ile Met Asn Pro Arg Leu Cys Gln Gln Leu																
	130				135					140						
gca tct atc tcc tgg ctc agt ggt ttg gct agt tcc cta atc cat gca																480
Ala Ser Ile Ser Trp Leu Ser Gly Leu Ala Ser Ser Leu Ile His Ala																
145	150				155					160						
act ttt acc ttg caa ttg cct ctc tgt ggc aac cat agg ctg gac cat																528
Thr Phe Thr Leu Gln Leu Pro Leu Cys Gly Asn His Arg Leu Asp His																
	165				170					175						
ttt att tgc gaa gta cca gct ctt ctc aag ttg gct tgt gtg gac acc																576
Phe Ile Cys Glu Val Pro Ala Leu Leu Lys Leu Ala Cys Val Asp Thr																
	180				185					190						
act gtc aat gaa ttg gtg ctt ttt gtt gtt agt gtt ctg ttt gtt gtc																624
Thr Val Asn Glu Leu Val Leu Phe Val Val Ser Val Leu Phe Val Val																
	195				200					205						
att cca cca gca ctc atc tcc atc tcc tat ggc ttc ata act caa gct																672
Ile Pro Pro Ala Leu Ile Ser Ile Ser Tyr Gly Phe Ile Thr Gln Ala																
	210				215					220						
gtg ctg agg atc aaa tca gta gag gca agg cat aaa gcc ttc agc acc																720
Val Leu Arg Ile Lys Ser Val Glu Ala Arg His Lys Ala Phe Ser Thr																
225	230				235					240						

tgc tcc tcc cac ctt aca gtg gtg att ata ttc tat ggc acc ata atc 768
 Cys Ser Ser His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Ile
 245 250 255

 tac gtg tac ctg caa cct agt gac agc tat gcc cag gac caa ggg aag 816
 Tyr Val Tyr Leu Gln Pro Ser Asp Ser Tyr Ala Gln Asp Gln Gly Lys
 260 265 270

 ttt atc tcc ctc ttc tac acc atg gtg acc ccc act tta aat cct atc 864
 Phe Ile Ser Leu Phe Tyr Thr Met Val Thr Pro Thr Leu Asn Pro Ile
 275 280 285

 atc tat act tta agg aac aag gat atg aaa gag gct ctg agg aaa ctt 912
 Ile Tyr Thr Leu Arg Asn Lys Asp Met Lys Glu Ala Leu Arg Lys Leu
 290 295 300

 ctc tcg gga aaa ttg tga 930
 Leu Ser Gly Lys Leu
 305

<210> 326
 <211> 309
 <212> PRT
 <213> Homo Sapiens

<400> 326

Met Gly Leu Gly Asn Glu Ser Ser Leu Met Asp Phe Ile Leu Leu Gly
 1 5 10 15

 Phe Ser Asp His Pro Arg Leu Glu Ala Val Leu Phe Val Phe Val Leu
 20 25 30

 Phe Phe Tyr Leu Leu Thr Leu Val Gly Asn Phe Thr Ile Ile Ile Ile
 35 40 45

 Ser Tyr Leu Asp Pro Pro Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

 Asn Leu Ser Leu Leu Asp Ile Cys Phe Thr Thr Ser Leu Ala Pro Gln
 65 70 75 80

 Thr Leu Val Asn Leu Gln Arg Pro Lys Lys Thr Ile Thr Tyr Gly Gly
 85 90 95

 Cys Val Ala Gln Leu Tyr Ile Ser Leu Ala Leu Gly Ser Thr Glu Cys
 100 105 110

 Ile Leu Leu Ala Asp Met Ala Leu Asp Arg Tyr Ile Ala Val Cys Lys
 115 120 125